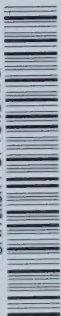
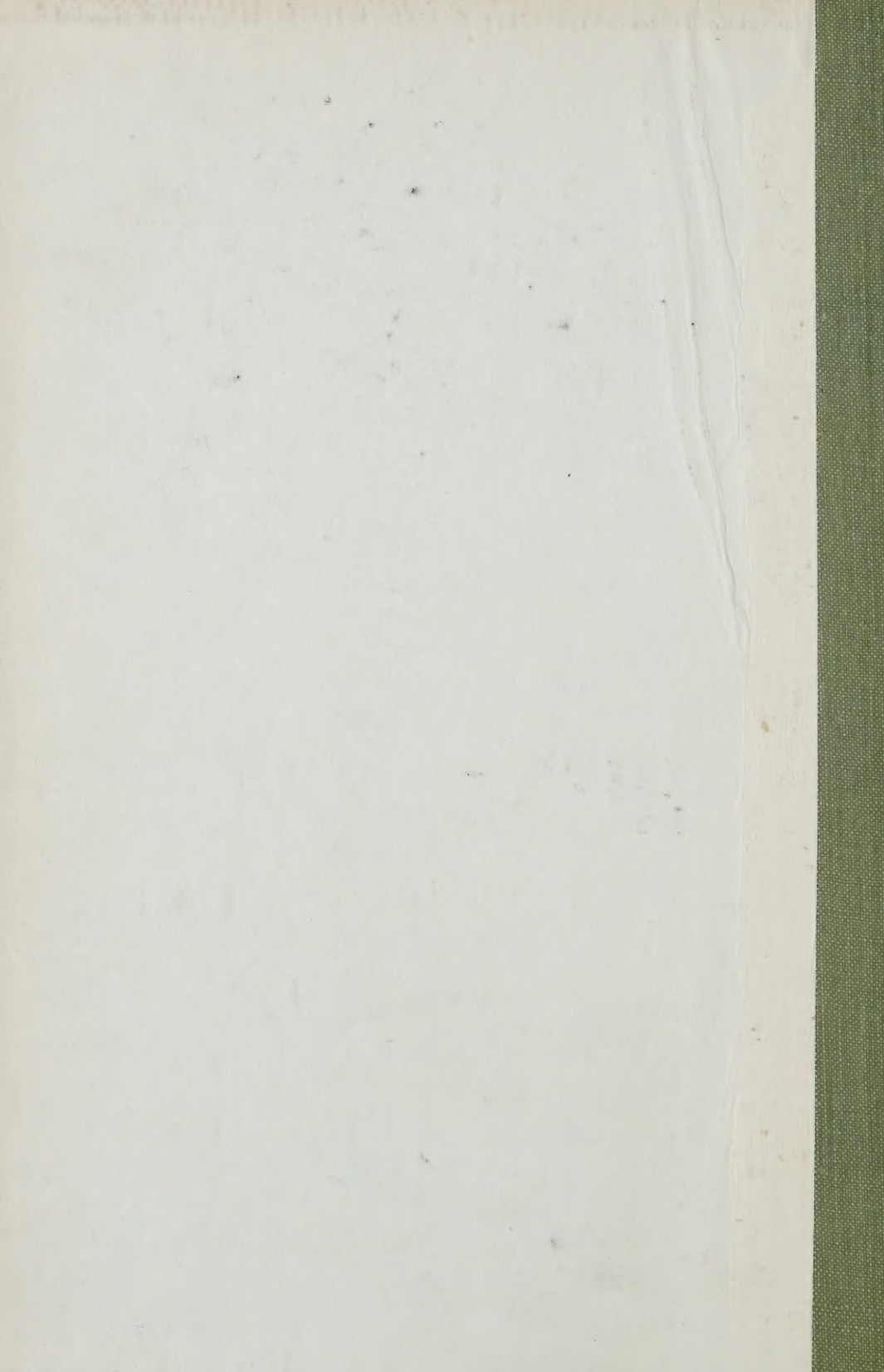


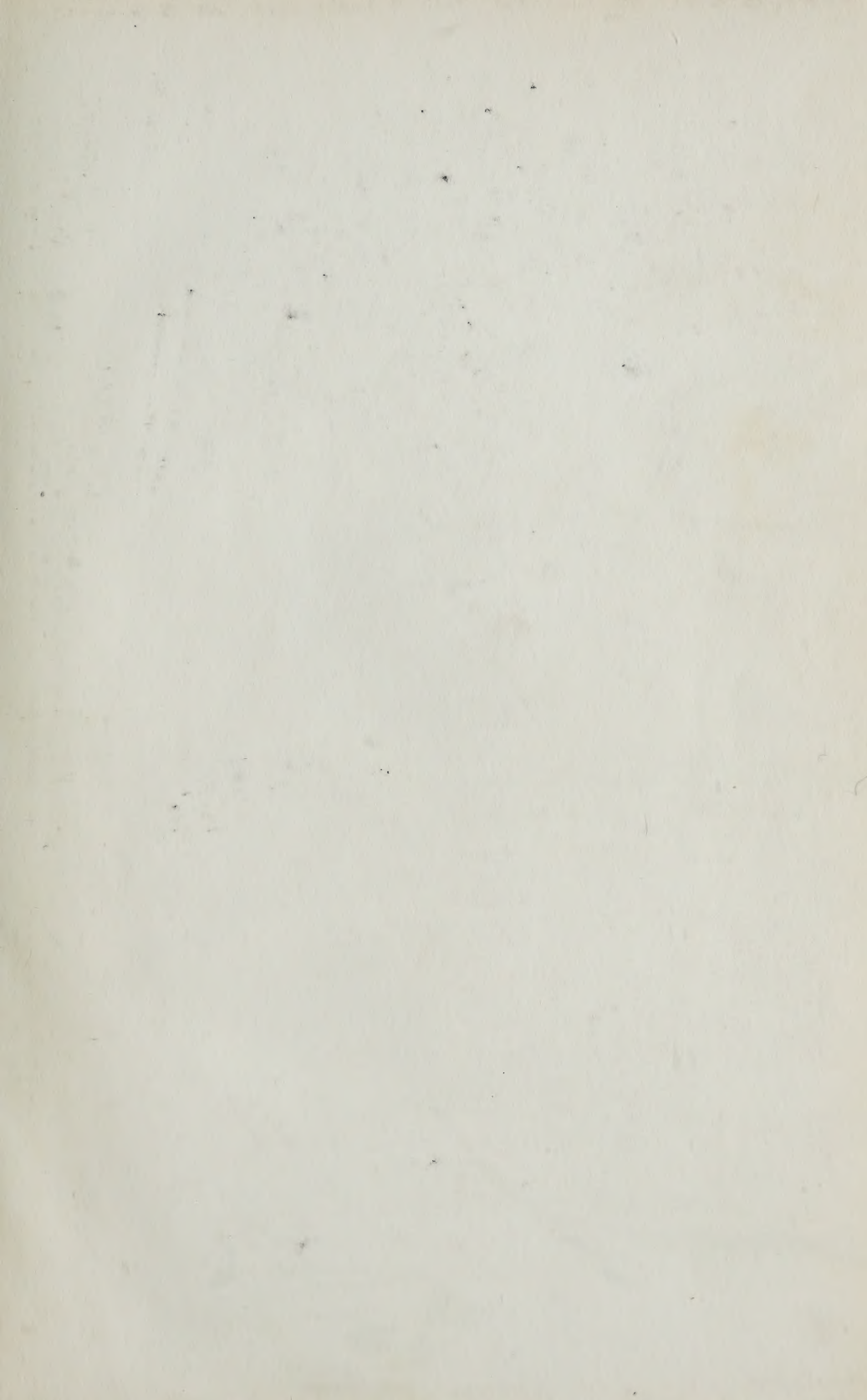
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Index to Volume 7—1941

INDEX—VOLUME 7		Page		Page
January	pages 1-	56	Radiogram in Periodontal Examination—What are the Main Values?—H. Murray Robb.....	184
February	pages 57-112		Relative Masticating Efficiency of Posterior Tooth Forms—Felix A. French.....	546
March	pages 113-168		Responsibilities of a Dental Service—Col. F. M. Lott.....	71
April	pages 169-228		School Dental Service in New Zealand—J. LL. Saunders.....	435
May	pages 229-282		Some Phases in Dental Economics—Kenneth M. Johnson.....	531
June	pages 283-340		Some Structural and Functional Features of the Alveolar Process in Relation to the Practice of Immediate Dental Service—R. L. de C. H. Saunders.....	343
July	pages 341-390		Stabilized Impressions—H. A. Gilchrist.....	293
August	pages 381-422		Third Molars—When Should They be Extracted—H. Murray Robb.....	185
September	pages 423-474		Trench Mouth—How Do You Recognize and Treat the Recurrent Condition? — Charles H. M. Williams.....	181
October	pages 475-528		Ultraviolet Sterilization of Instruments—W. Scott Hamilton.....	124
November	pages 529-584		Unusual Case of Dental Interest — George A. Morgan.....	544
December	pages 585-654		What Makes People Respond?—Elmer Wheeler.....	59
			Why Not Banker-Dentist Co-operation?—T. L. Marsh.....	188
			Yesterday, Today and Tomorrow—B. K. Sandwell.....	3
			Your Children's Teeth—A. E. Higgins.....	239
FRONTISPICES				
Guest, Edmund T., D.D.S.....		2		
Conboy, Frederick J., D.D.S.....		58		
Dixon, J.M., D.D.S.....		114		
Fasken, L. J. D., D.D.S.....		170		
Mason, Arnold D., D.D.S., F.A.C.D.....		230		
Fortier, Armand, D.D.S.....		284		
Grant, Edmund A., D.D.S.....		342		
Carver, J. Kenneth, D.D.S.....		382		
MacGregor, Stewart A., D.D.S.....		424		
Agnew, R. Gordon, D.D.S.....		476		
Fisk, G. Vernon, D.D.S.....		530		
Beckwith, W. H. H., D.D.S.....		586		
MANUSCRIPTS				
Acrylic Resins—E. E. Bruce.....		237		
Acrylic Resin as a Denture Base—Felix A. French.....		15		
Amalgam Restorations in Oral Health Service—Arne F. Romnes.....		498		
Back from the Blitz—Major I. W. Hamilton.....		486		
Canadian Dental Corps—Capt. W. J. Gibson.....		449		
Canadian Dental Corps Technicians' Course—Frank Lott.....		395		
Canadian Dental Hygiene Council — Harry S. Thomson.....		443		
Case History—John W. Clay.....		238		
China and the World Today—R. Gordon Agnew.....		477		
Crooked Teeth—A. E. Higgins.....		245		
Dental Education in Canada during War Time—Arthur L. Walsh.....		285		
Dentists from India—Miss Monica Muga.....		548		
Early Symptoms of Periodontal Disease—How May They Be Recognized?—C. Alvin Snell.....		177		
Facing Tomorrow—Nedrew Tellug—247, 306, 430, 552				
Fixed or Removable Bridges—Which Does the Periodontist Prefer?—A. J. McDonagh.....		179		
Gangrenous Stomatitis—Harold Trotter.....		20		
Halitosis—M. A. Ross Thomas.....		182		
Historical Outline of Dentistry in the British and Canadian Forces—Col. Frank M. Lott.....		12		
Human Progress—Frederick E. Warriner.....		610		
Indirect Inlay Technique—P. G. Anderson.....		390		
Interpretation, Prophylaxis and Therapy of Certain Acquired Defects of the Hard Dental Structures—Harold K. Box.....		231		
In War Time—F. N. Doubleday.....		425		
Median Anterior Maxillary Cysts — George A. Morgan.....		121		
Method of Constructing Water-cooled Impression Trays for Unusual Cases, and Other Suggestions in Immediate Denture Prosthesis — William W. Hurst.....		489		
Mobile Clinic of the Canadian Dental Corps—Col. Frank Lott.....		431		
Nitrous Oxide Analgesia in Dentistry—W. L. Durant.....		17		
Normal and Abnormal Conditions in Children's Mouths and Suggested Treatment — Joseph T. Cohen.....		115		
Occlusion on Partial Dentures—How Can It Be Controlled?—Charles H. M. Williams.....		187		
Oral Manifestations of Vitamin Deficiency—J. Wallace Graham.....		7		
Personnel and Personality in the Dental Office—John A. Bothwell.....		537		
Photomicrographic Study of Tooth Development—Harold Trotter.....		587		
Practical Use of Vitamins in Medical and Dental Practice—Hugh R. Butt.....		383		
Practice Building and Management — William Miller.....		171		
Practice of Dental Surgery—Henry Sage Dunning.....		67		
President's Address, Eastern Ontario Dental Association Convention—E. B. Sparks.....		16		
EDITORIALS				
Accomplishments of Advanced Age.....		561		
Bombed Surgeries.....		33		
Canadian Dental Association and Canadian Dental Corps.....		623		
Dr. Hannah Speaks Out of Turn.....		313		
Enemy of the Good, The.....		31		
Future of Dentistry in Canada, The.....		447		
Letters to the Editor.....		87		
National Income.....		405		
Place of a Dentist in the National Emergency.....		355		
Public Dental Health Education—T. R. Marshall.....		401		
Quality Versus Quantity.....		501		
School Dental Service.....		255		
Subacute Bacterial Endocarditis.....		141		
What's Wrong with Business?.....		201		
REPORTS OF COMMITTEES				
Canadian Dental Hygiene Council.....		118, 443		
Committee on Nomenclature, American Academy of Periodontology.....		350		
BOOK REVIEWS				
Accepted Dental Remedies.....		565		
Applied Orthodontics.....		143		
Control of Pain in Dental Practice.....		34		
Credit and Collection Psychology for Professional Men.....		90		
Dental Caries.....		625		
Dental Education in the United States.....		503		
Dental Formulary.....		203		
Exodontia.....		315		
Juvenile Dentistry.....		625		
Merck Manual of Therapeutics and Materia Medica.....		204		
Oral Pathology.....		624		
Orientation in American Dentistry, Its History and Social-professional Background.....		143		
Pathology for Students and Practitioners of Dentistry.....		565		
Practice Building and Building for Practice.....		144		
Prescription Writing and Formulary for Dentists.....		259		
IN MEMORIAM				
Agar, Homer E.....		370		
Astle, William Wilfred.....		370		
Atkinson, Arthur Stewart.....		370		
Biethour, William A.....		462		
Brown, Lt.-Col. Claude.....		328		
Comstock, Frank Leslie.....		156		
Cross, Milton F.....		216		
Curry, Duncan Alexander MacDonnell.....		572		
de Lisle, Joseph Ulric.....		156		
Dobbs, Eric.....		216		

	Page
Hanna, Richard Samuel.....	370
Harrington, Ernest A.....	412
Heal, Capt. Herbert Newton...	216
Humeston, F. L.....	100
Jarman, Frank S.....	156
MacKenzie, Ann S. E.....	572
McNabb, Capt. Donald.....	642
Magee, James M.....	270
Michell, Allen Clarke.....	370
Musselman, J. Doan.....	642
Nickerson, Prof. C. B.....	99
Oliver, Ernest Jason.....	328
Reynolds, Samuel P.....	328
Roland, John Murray.....	412
Ross, Lt.-Col. Frederick Blyth	216
Sproule, Albert Orr.....	328
Steele, Robert.....	412
Stoddart, Thomas Wilson.....	462
Sutton, James L.....	328
Tinker, Edward Toy.....	412
Weir, William Wilfred.....	328
Wilkinson, William Robert.....	216
Wright, Herbert Walter.....	516

LIST OF CONTRIBUTORS

Agnew, H. Gordon.....	477
Anderson, P. G.....	390
Bagnall, J. Stanley.....	24
Bothwell, John A.....	537
Bowles, Manly.....	79
Box, Harold K.....	231
Bradley, Sydney W.....	79
Bruce, E. E.....	237
Butt, Hugh R.....	383
Campbell, M. A.....	612
Christiansen, George W.....	130
Clay, John W.....	78, 132, 238
Cohen, Joseph T.....	115
Doubleday, F. N.....	425
Dunning, Henry Sage.....	67
Durant, W. L.....	17
Fisk, G. Vernon.....	78
French, Felix A.....	15, 546
Gibson, Capt. W. J.....	439
Gilchrist, H. A.....	293
Graham, G. Wallace.....	7
Hamilton, Major I. W.....	486
Hamilton, W. Scott.....	124
Higgins, A. E.....	239, 243
Hurst, William W.....	489
Jamieson, H. S.....	24
Johnson, J. H.....	133
Johnson, Kenneth M.....	531
Jones, Emery.....	24
Lott, Col. Frank M.....	12, 71, 355, 395, 431
McClelland, A. W.....	78
McDonagh, A. J.....	179
MacGregor, S. A.....	25
Marshall, T. R.....	25, 401
Marsh, T. L.....	188
Miller, William.....	171
Moore, Stephen A.....	34
Morgan, George A.....	121, 133, 544
Mugan, Miss Monica.....	548
Robb, H. Murray.....	184, 185
Romnes, Arne F.....	298
Sandwell, B. K.....	2
Saunders, J. L.....	435
Saunders, R. L. de C. H.....	343
Snell, C. Alvin.....	177
Sparks, E. B.....	16
Tellug, Nedrew.....	247, 306, 430, 552
Thomas, M. A. Ross.....	182
Thomson, Harry S.....	443
Toombs, B. L.....	25
Trotter, Harold.....	20, 587
Walsh, Arthur L.....	285
Warriner, Frederick E.....	610
Wheeler, Elmer.....	59
Williams, Charles H. M.....	181, 187
Willius, F. A.....	130

SUBJECT INDEX

Acetanilid.....	84
Acrylic Resins.....	15, 237
Alcohol.....	30
Allergy.....	553
Amalgam.....	298
Anaesthesia.....	137
Analgesia.....	17
Aspirin.....	139

Assistants.....	190, 193, 248
Assistants in Dental Corps.....	566
Banker-Dentist Co-operation.....	188
Board of R.C.D.S.....	38
Bridgework.....	24, 179
British Columbia Dental Act.....	362, 459
Calcium.....	83, 211
Canadian Dental Corps.....	12, 35, 71, 94, 146, 204, 261, 316, 358, 431, 439, 457, 505, 565, 626
Canadian Dental Hygiene Council.....	118, 155, 443
Case History.....	239
Caries.....	253
Children's Dentistry.....	82, 83, 115, 194, 239, 353, 399, 559
China.....	477
Closed Bites.....	252
Cold Therapy.....	400
Crooked Teeth.....	243
Cysts.....	121, 544
Decrease in Dental Profession.....	327
Defects of Hard Dental Structures.....	231
Dental Practice.....	59, 77, 126, 171, 188, 190, 201, 253, 500, 531, 537
Dental Surgery.....	67
Dentures.....	187, 293, 343, 489, 546
Diet.....	85, 410, 445
Dominion Dental Council.....	154, 409
Economics.....	43, 59, 531, 537
Education.....	249, 285, 309, 326, 401, 571, 615
Endocarditis.....	129, 141
Exodontia.....	185
Facing Tomorrow.....	247, 306, 430, 552
Faculty of Dentistry, University of Toronto.....	569
Farm Health Program.....	213
Finger Sucking.....	619
Focal Infection.....	138, 498
Future of Dentistry.....	447
Government.....	3
Guy's Hospital.....	39, 153, 210, 408
Halitosis.....	182
Hartman Solution.....	42
Harvard School of Dental Medicine.....	621
Health.....	138, 155, 243, 269, 308
Hospitals.....	324, 513
Impressions.....	293
Incorporation.....	268
India.....	548
Industrial Dentistry.....	135
Inlays.....	390
Jacket Crowns.....	499
Legal Aspect of Radiodontics.....	555
Lip Lesions.....	445
Mobile Clinic.....	431
New Zealand School Dental Service.....	435
Nitrous Oxide.....	83
Nomenclature.....	350
Northwestern University.....	99
Occlusion.....	187, 252
Old Age.....	561
Oral Medicine.....	556
Orthodontia.....	78, 198
Periodontia.....	80, 99, 139, 177, 184, 253
Pregnancy.....	199
President's Address.....	16
Problems in Practice.....	24, 78
Profession.....	26
Prophylaxis.....	399, 618
Protection of Practices.....	44
Psychology.....	22, 73
Public Health.....	100, 213
Reception of Patient.....	77
Rockefeller Foundation.....	411
Rural School Dental Service.....	612
Saliva.....	251
Scholarships in Dentistry.....	461
School Dental Service.....	255, 435, 446, 501
Silicates.....	81
Space Maintainers.....	398
Sterilization.....	124
Stomatitis.....	20
Success.....	23, 73, 171, 500
Sulfanilamide.....	410
Technicians Course.....	395
Tender Teeth.....	26
Third Molar.....	198
Tobacco.....	30
Tooth Development.....	587
Vincent's Infection.....	29, 181
Vinethene.....	617
Vitamins.....	7, 307, 311, 383, 499, 511, 559, 628
War-time.....	425, 486
Water-cooled Impression Trays.....	489
Winant Speech.....	396
X-ray.....	184, 553

Index au Volume 7—1941

TABLE ALPHABETIQUE DES AUTEURS

La pagination des mémoires originaux est indiquée en caractères gras.

	Page
Bercher, Jean—Blocage bi-maxillaire par ligatures selon le procédé de R. H. Ivy	108
Fait clinique, observation d'un kyste paradentaire évoluant dans la joue	339
Blondin, Arthur—Une technique pour la prise des empreintes du bas (traduit de l'anglais par Gérard de Montigny)	47
Bo Burman et Eric Jonson—La tuberculose buccale dans ses relations avec l'appareil dentaire	101
Brault, Jean—Hygiène dentaire	223
Dechaume, M.—Gingivo-arthrites dentaires et avitaminoses	420-471
de Montigny, Gérard—Nouvelles de la Société Dentaire de Montréal	112
Les fractures de la tubérosité maxillaire au cours de l'extraction de la deuxième ou de la troisième molaire supérieure	518
Dupuis-Mauor, Charlotte — Réimplantation des dents	217
Durand, Martial—Le rôle de l'assistante dans le cabinet du dentiste	331
Fortier, Armand—Hygiène dentaire	223
French, Felix A.—Dentiers en substances acryliques (traduit de l'anglais par Gérard de Montigny)	157
Harris, Lamar W. — Les résines acryliques en dentisterie opératoire	522
Hébert, Amherst—Mon docteur m'a dit	54
Luciani, F. C.—L'angoisse dentaire (Revue Stomatologie)	344-372
Mahé, M. G.—L'amputation coronaire de la pulpe	161
Naar, F.—Un cas de névralgie d'une branche dentaire du trijumeau, traitée avec succès par des injections sous-cutanées de vitamine B ₁ synthétique	644
Poitras, P. E.—Evolution de la dentisterie	52
Rinné, Docteur—Les vitamines dans la médecine infantile	525
Slisberg, Dr.—Un cas de névralgie d'une branche dentaire du trijumeau traitée avec succès par des injections sous-cutanées de vitamine B ₁ synthétique	644
Thibaudeau, A.—Les dentistes de demain	463
Editorial	45
Docteur (Le) Augustin Graton	517
Vauthier, U.—La question des Hypo-Vitaminoses C. et leur aspect stomatologique	374-416
Weiss, Samuel — Infection secondaire des voies gastro-intestinales à la suite de maladies buccales, (traduction A. Thibaudeau)	274
Woodbury, W. W. — Message du Président de l'Association Dentaire Canadienne (traduction de René Gautheron)	271
Organisation et éducation dentaires (traduction A. Thibaudeau)	415

TABLE DES MATIERES

Les chiffres en caractères gras indiquent les mémoires originaux

Amputation (L') coronaire de la pulpe, par M. G. Mahé	161
Angoisse (L') dentaire, par F. C. Luciani (Revue de Stomatologie)	334-372
Blocage bi-maxillaire (Le) par ligatures selon le procédé de R. H. Ivy, par Jean Bercher	108
Dentiers en substances acryliques, par Felix A. French, traduit de l'anglais par Gérard de Montigny	157
Dentistes de demain (Les) par A. Thibaudeau	463
Editorial, par A. Thibaudeau	45
Envisageons les faits (Communication du comité de l'avancement dentaire national)	329

	Page
Evolution de la dentisterie, par P. E. Poitras	52
Fait clinique—Observation d'un kyste paradentaire évoluant dans la joue par J. Bercher	339
Fractures (Les) de la tubérosité maxillaire au cours de l'extraction de la deuxième ou de la troisième molaire supérieure, par Gérard de Montigny	518
Gingivo-arthrites dentaires et avitaminoses, par M. Dechaume	420-471
Hygiène dentaire par Jean Brault et Armand Fortier	223
Hypo-Vitaminoses V (La question) et leur aspect stomatologique, par U. Vauthier	374-416
Infection secondaire des voies gastro-intestinales à la suite de maladies buccales, par Samuel Weiss (traduction A. Thibaudeau)	274
Ideal professionnel et alimentation conforme à la constitution de l'homme, par Stanislas Gaudreau	573
Limite (Il y a une) — Communiqué du comité national du progrès dentaire	380
Message du Président l'Association Dentaire Canadienne, par W. W. Woodbury (traduction René Gautheron)	271
Mon docteur m'a dit, par Amherst Hébert	54
Névralgie (un cas de) d'une branche dentaire du trijumeau, traitée avec succès par des injections sous-cutanées de vitamine B ₁ synthétique par F. Naar et le Dr Slisberg	644
Organisation et éducation dentaire, par W. W. Woodbury (traduction A. Thibaudeau)	413
Réimplantation des dents, par Charlotte Dupuis-Mayor	217
Rôle (Le) de l'Assistante dans le cabinet du dentiste, par Martial Durand	331
Résines acryliques en dentisterie opératoire, par Lamar W. Harris	522
Section (La) d'hygiène dentaire, par le docteur R. R. Lalonde	520
Technique (Une) pour la prise des empreintes du bas par Arthur Blondin, traduit de l'anglais par Gérard de Montigny	47
Tuberculose buccale (La) dans ses relations avec l'appareil dentaire par Bo Burman et Eric Jonson	101
Vitamines (Les) dans la médecine infantile, par le docteur Rinné	525-580-649

CONGRES

Le prochain congrès	46
Congrès dentaire de Québec	55
Congrès (Le) de Québec	168
Congrès (Le)	227
Congrès de L'Association des chirurgiens dentistes de langue française de l'Amérique du Nord	273
Congrès (Le) de Québec	371

DIVERS

Conseils pratiques recueillis par A. Amoedo	110
Conseils pratiques recueillis par A. Amoedo	227
Conseils pratiques recueillis par A. Amoedo	281
Revue de Stomatologie	647
Nouvelles de la Société Dentaire de Montréal, par Gérard de Montigny	112
Revue des Revues	166
Votre intérêt est en jeu!	643

IN MEMORIAM

Jean Vandal	474
Augustin Graton	517
Robert Makay	584



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Again Egypt is in the limelight of world affairs as great armies mass in the East. — Here is the Temple of Sethos at Abydos.



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Yesterday, Today and Tomorrow

by B. K. SANDWELL, Toronto, Ontario*

WE ARE accustomed to think that we know yesterday, because the records of what happened in it have been preserved for us by the historians. We are accustomed to think that we know today, because we are in today and can see what is happening in it. We are accustomed to think that tomorrow is the only one of these three that is hidden from our gaze. But the truth is that we know none of them. We think that we know yesterday, because the events of it have been shaped into a pattern for us by our currently accepted historians; but the pattern which they have shaped may be superseded by a new set of historians, with a new interpretation of yesterday, five or fifty or five hundred years from now. What we know is the current theory about yesterday, not yesterday itself. About today we have not even a current theory, for there has not been time for the historians to prepare one. True, we are in today, and can know a little bit of it, that little bit of it which is within the range of our immediate apprehension, just as a fly in the dome of St. Paul's may perhaps comprehend the stone upon which he is sitting and a stone or two around it;

but it is very improbable that he can comprehend the design and structure of the dome itself. If we could really know yesterday and today, we should possibly also know tomorrow; and it may be that the prophets, the people who appear to know tomorrow to a certain extent, are merely people with a much deeper knowledge of yesterday and today.

I do not claim very much knowledge about tomorrow, but I do believe very earnestly that tomorrow, in the sense of the period in which we shall find ourselves when things have settled down after the present war, will be so different from today that history will describe the change from the one to the other as a Revolution. And I think that if we really knew today, and had a really valid theory about yesterday, we should feel that that Revolution, of whatever kind it may be, peaceful or otherwise, slow or rapid, sudden or gradually prepared, is a natural thing, a necessary and inevitable thing, and not a terrifying thing which we should do all in our power to resist and to prevent.

Let us examine one or two of the characteristics of yesterday and today—of the era through which we passed prior to the

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First Great War, and the era in which we have been existing since that war. One of its characteristics, and one which historians are already beginning to recognize and will recognize still more fully as time goes on, is that in it the things which have been held as the prime values are the things which can be bought and sold—such things as bonds and stocks and machinery and goodwill and labour skill and inventive intelligence and the like. And the great achievements of yesterday and today have all been related to the same sort of thing; they have consisted in railways, in electric power, in banks, in roads, in canals, in big ships, in skyscrapers, all of them things that can be bought and sold and that help in the buying and selling of other things.

But there are many things in human life that cannot be bought and sold. You cannot buy men to get themselves killed in battle. If you could, the Germans would never have been able to start this war, for we, their enemies, have a great deal more money than they have and can afford to pay a great deal more money to people to get themselves killed. It is true that soldiers receive money, but they do not go soldiering for the money there is in it. They have to have a lot of additional motives, such as love of country, love of freedom, belief in their country's institutions, desire to protect their families and friends and fellow-citizens, and so on and so on. You cannot buy religious faith. You cannot buy loyalty. You cannot buy freedom; nobody ever achieved or defended freedom with a mercenary army; the mercenaries, eventually, and quite rightly, take away the freedom that they are paid to defend. You cannot buy love. You cannot even buy respect, though there are press agents who will undertake to procure you an imitation of it if you are prepared to pay the price.

The architecture of an era is the clearest sign of the things that man has con-

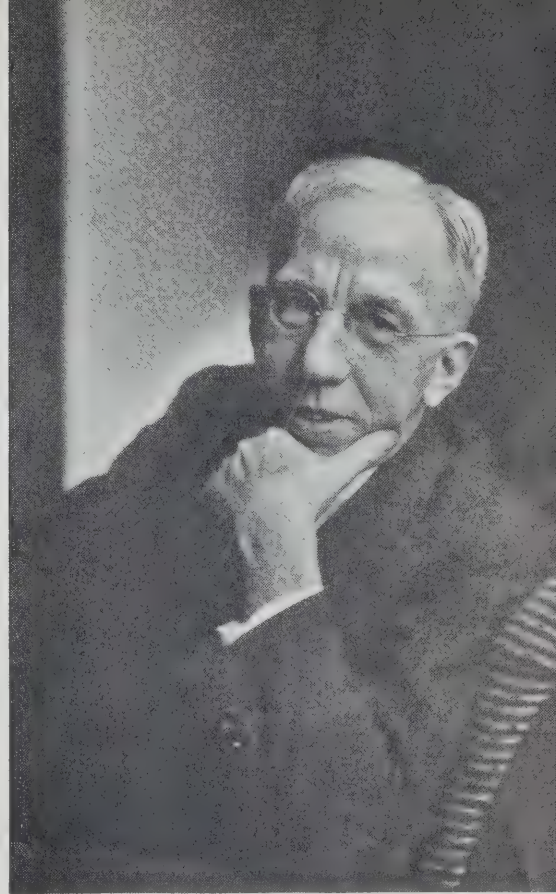
sidered important during that era. These things change from time to time. In that great city of London whose magnificent defence we are now watching with such intense interest, the earliest surviving architecture is that which is concerned with the procuring of safety from enemies. The Tower of London is one of the oldest buildings still standing. Security is naturally one of the earliest things about which men concern themselves; but when that has been attained, or as nearly attained as may be, they begin to turn themselves to other things. And their second interest is likely to be the worship of God. In the Tower of London, in every castle on every hilltop in that historic country of England, you will find as the core and centre of the whole layout a chapel, the place where the worship of God was carried on, and where the spiritual life of the community was enshrined. A little later, with a greater degree of security, when men no longer had to seek shelter constantly within fortified walls, we begin to find the architecture devoted to the worship of God extending itself all over the land, and taking expression in innumerable buildings of the various stages of Gothic, and later, after the Reformation, in the classical Renaissance churches of the London of Sir Christopher Wren. The worship of God was still, even at that advanced time, the chief preoccupation of architecture; but it was beginning to be rivalled by the claims of Government. The palaces of Kings were becoming as architecturally important as the cathedrals. The courts of justice, the offices of governmental administration, were becoming more and more noble and ambitious.

When I first came to Toronto the things most visible on the skyline as one approached the city across the lake were the towers and spires of innumerable churches, with the then unfinished roof of the Parliament Buildings in Queen's

B. K. SANDWELL

Park as their only rival in height and dignity. Today, how greatly changed is that same scene, and how universally the same change has taken place in every important city of the world. For today it is the temples, not of religion, nor of government, but of commerce and finance, that dominate the skyline of every one of our great metropolitan cities. With us, the money-changers have not taken possession of the courtyard of the temple, they have built themselves much bigger temples of their own. The great cities of the world are not the capital cities of nations but are the great markets of international commerce; not Washington, but New York; not Ottawa, but Montreal and Toronto.

Now it has always been the conviction of the people who dwell in these haunts of commerce and finance, that among the things which can be bought and sold is the sovereign power of the state, Government itself. And much of the time they have been right. Much of the time it is possible to buy the services of the sovereign power. I do not mean that you can buy the government in a crude sense of that word. You do not walk into the office of the appropriate minister and hand him a few hundred thousand dollars in order to induce him to guarantee this



—Photo by Karsh, Ottawa

bond issue, or to protect that industry, or to lighten the taxes on such and such a financial operation, or to give a chunk of the public assets, the forests, the waterpowers, the minerals of the land, to such and such an exploiting group. The process is nothing like as crude as that, but in its ultimate results it comes to very much the same thing. Some of the time, in this limited sense, the sovereign power of the government can be bought and sold in much the same way as anything else is bought and sold in the temples of trade. But all this is only when the people, the common people, don't care very much whether the sovereign power is bought and sold or not. It is when they are not concerning themselves very greatly about the government. It is when the things that the government does don't

seem to affect them very closely—when they have all the work they feel like doing, and enough wages to let them want only a little more, which is just the right amount to keep them interested and contented. We in Canada, we all over North America, have been in much that condition for the last forty or fifty or sixty years.

But we are not in that condition today. The world is at war. There is practically no nation which is not at war, whether it admits it or not. Certainly nobody can say that either Russia or the United States, the two great neutrals, is in a state of genuine peace. They are both in reality at war, and the only difference between them is that the United States can only be at war on one side, and will remain with that side whatever happens, while Russia is quite prepared to switch sides whenever she sees that her interests will be advanced by so doing.

And the war of today is total war, and total war is total war, whether you are the aggressor or the defender; whether you are the nation that started warring totally or whether you are the nation against which the total war was started. And total war means that everybody is in it. Wherever fighting is actually going on, it is not only the fighting men, but everybody in the entire country, who is in danger. In England everybody is shooting and everybody is being shot at.

Now what I want to suggest is that this sort of thing makes a radical change in the feelings of people about their government. People will not shoot and be shot at in defense of a government which can be bought by financiers. If government in future is going to be a thing which people will fight for, the financiers must be put in their place, the place where

only the things which can properly be bought and sold are bought and sold, and they must be kept from coming out and doing their buying and selling in the temples of government and in the temples of religion. That which can properly be bought and sold is property. But sovereignty, the essential right of the government, is higher than property. Sovereignty defines property, creates property; without the fiat of sovereignty to that effect, property does not exist. In the 19th Century there was a widely current idea—current among people who owned property—that property rights were established by the will of God, and that the sovereign power had no business interfering with them. There are vestiges of that idea visible among us even now. But it will have to be abandoned. It is possible to think of God in connection with the sovereign power, but it is not possible to think of God in connection with a limited liability company. It is not only possible, but we actually do constantly think of God in connection with the sovereign power. There is a mystical quality about the sovereign power, and there is nothing in the least mystical about a limited liability company. Men can and constantly do acquire a relationship with a limited liability company for a few dollars or a few thousands of dollars, and get rid of it as readily for the same consideration. A millionaire with enough millions, or with enough other millionaires associated with him, can buy the control of any limited liability company in the world. No amount of millions should be able to buy control of the sovereign power. We must get the sovereign power set up once again, high above the market place, and get it once more closely associated with the worship of God.

There may be many different forms of treatment but there is only one correct diagnosis."—William Osler.

Oral Manifestations of Vitamin Deficiency *

by J. WALLACE GRAHAM, M.D., D.D.S., M.R.C.P., Toronto, Ontario

MANY members of the dental profession will recall the time thirty years ago when a new word "vitamin" was first thrust upon their vocabulary. Since then achievements in the science of nutrition are among the most significant in modern medicine. The original alphabet for the vitamins has been greatly extended and subdivision of the letters is now a necessity.

Forty years have passed since Eijkman first observed that fowls restricted to a diet of polished rice developed a form of neuritis. This was a discovery of great importance as up to this time it was believed that the essential components of an adequate diet were protein, fat and carbohydrate with several inorganic elements in suitable combination. For thirteen years Eijkman's observations attracted little or no attention until Funk (1910) repeated the experiments and concluded that another factor was essential in human nutrition, a lack of which resulted in polyneuritis. This substance he called "vitamine".

Hopkins, in 1912, experimented further by feeding purified fats, proteins, carbohydrates and salts to young animals and observed that they failed to grow but that growth was resumed when small amounts of milk were added to the diet. To these necessary growth factors he gave the name "accessory substances". Later, these factors were divided into two groups and called by McCollum "fat soluble A" and "water soluble B", both being necessary for life and growth. Further experiments have led to the isolation

of many more vitamins each with a specific action, many of which have now been isolated in pure form and some synthetically produced.

This paper will deal only with oral manifestations of vitamin deficiency, but certain general facts must be taken into consideration. (1) True clinical cases of vitamin deficiency are rarely encountered in this country. (2) A lesser degree of vitamin deficiency, without the appearance of clinical signs, probably does exist,—the so-called sub-clinical avitaminosis. (3) When there is evidence of deficiency of one vitamin, a lack of others probably exists so that treatment with one factor alone may not be wholly successful. (4) The normal vitamin requirement of the individual is contained in a well-balanced diet. The place to buy vitamins is in the grocery store, not in the drug store. Only occasionally are large, concentrated doses of vitamins essential in treatment.

VITAMIN A

Vitamin A cannot be formed in the human body without the ingestion of plant pigments. For example, the pigment carotene found in carrots is convertible in the body into vitamin A. The liver is the probable site of this conversion and, in most animals, storage of vitamin A occurs in the liver, the reserve being utilized during periods of deficient diet. A remarkable example is found in fish livers, particularly in that of the halibut which yields a liver oil with several hundred times the vitamin A potency of ordinary cod liver oils.

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The pathological features of vitamin A deficiency are the consequence of epithelial changes. The first change is an epithelial atrophy followed by proliferation of basal cells which later form a stratified keratinizing layer. The distribution of this change may be widespread, involving cells in almost any part of the body, especially in the eye.

A suggestion that the teeth and gums might be affected by Vitamin A deficiency has been made by Mellanby and King.¹ After placing puppies on a diet deficient in vitamin A, they found that the animals developed a marked hyperplasia of the gums which led to softening, gingivitis and pyorrhea. Degeneration of the cells which form enamel and dentine resulted in disorders of calcification, with consequent dental deformity. Degeneration of the maxillary and mandibular division of the trigeminal nerve was observed in some of the animals. When vitamin A or carotene was added to the diet, such lesions did not develop. *Similar observations have not been made in humans so that the exact relation of vitamin A to oral disease in man is not yet established.*

Vitamin A has been called by some the anti-infective vitamin, but this term should be discarded as it gives an exaggerated impression of the value of vitamin A in infection.² Experimental evidence shows that vitamin A has an anti-infective value in cases of severe deficiency but it has no effect upon the course of an infection unless the deficiency is present. There would seem to be no adequate support for giving large doses of vitamin A in cases of infection that already are having a normal vitamin A intake.

VITAMIN B

The original concept of vitamin B was a very simple one, but the present picture is much more intricate. Accumulating evidence has shown that vitamin B is a very complex substance containing a heat-

labile component and a heat-stable component. In the United States the term vitamin B has been retained for the former and vitamin G (in honour of Goldberger) suggested for the latter. British workers, on the other hand, have adopted the terms B₁ and B₂ for the two factors. It has since become evident that B₂ is not a single chemical substance but an extremely complex material, the status of which is still incomplete and confusing. However the present conception of vitamin B is, in part, as follows:—

Vitamin B₁ (heat-labile) — Thiamin chloride.

Vitamin B₂ (heat-stable) — a complex containing many substances some of which are now used therapeutically alone or in combination. The factors of significance in oral lesions are (1) riboflavin, and (2) nicotine acid.

VITAMIN B₁ (THIAMIN CHLORIDE)

The physiological action of vitamin B₁ is associated with carbohydrate metabolism and with the oxidative mechanisms in the body. Most animals are unable to store a large reserve of B₁ and under normal conditions the heart, liver and kidneys contain most of the vitamin. It is unusual to find a condition of pure B₁ deficiency in this country but the disease beriberi, common in the Orient, represents a definite B₁ deficiency. The clinical symptoms are limited almost entirely to the cardiovascular, gastrointestinal and nervous systems; there are no marked oral manifestations. Thiamin chloride will, however, cure the forms of neuritis associated with alcohol and pregnancy, and recently it has been shown to be effective in the treatment of trigeminal neuralgia or tic douloureux.

Borsook and his co-workers³ have reported the treatment of 58 cases of tic douloureux with intravenous thiamin chloride. Some patients were given liver extract as well. Marked improvement was

J. WALLACE GRAHAM



noted in 37 cases; 15 were improved; 3 were slightly improved; and only 3 showed no improvement. Such results are more than encouraging and suggest that patients suffering from this distressing malady should be given a trial with thiamin chloride before submitting them to major surgical procedures.

VITAMIN B₂ (RIBOFLAVIN)

This factor of the B complex is of particular interest to the dentist because the lesions associated with deficiency are confined to the oral region. Sebrell and Butler⁴ first described the condition in 1938. With riboflavin deficiency the individual first develops a pallor of the lips, which is followed by maceration and the development of transverse fissures in the angle of the mouth. There is little inflammatory reaction; the lesions remain moist and are covered with a honey-coloured crust which scrapes off without

bleeding. The lips become abnormally red along the line of closure. Later, the fissures may extend for half an inch in the surrounding skin. Erosions around the eyes, with itching and burning and a shark-skin appearance of the skin over the nose are also described⁵. These lesions all disappear with the administration of riboflavin tablets by mouth.

NICOTINIC ACID

Pellagra, a disease due to vitamin deficiency, has definite and characteristic oral manifestations. There is evidence now that black tongue in dogs and human pellagra are analagous conditions produced by deficiency in the same dietary factor. Fortunately this disease is almost unknown in Canada but pellagra was a major health problem in the southern United States until its treatment with nicotinic acid was discovered.

Clinical pellagra is a systemic disease

which affects chiefly the alimentary tract, skin and nervous system. In the mouth, one finds a typical glossitis with swelling and redness of the margins and tip of the tongue which, as the disease progresses, extends to involve the entire tongue. This is one of the earliest signs diagnostic of the disease. Stomatitis, gingivitis and pharyngitis also develop and progress in a similar manner with subsequent infection, often with Vincent's organisms. Marked salivation occurs in advanced cases. Pigmentation of the skin, which becomes a reddish-brown colour, may occur in any portion of the body. With the administration of nicotinic acid by mouth, the mucous membrane lesions completely disappear.

Of special interest to the dentist is the recent publication by King⁶ on the treatment of Vincent's infection and trench mouth with nicotinic acid. The histories of four cases of severe Vincent's infection which were treated successfully by the oral administration of nicotinic acid are presented. The author also mentions encouraging results in thirty additional cases. One finds it difficult to believe that trench mouth, as seen in this country, is related to vitamin B deficiency. However, further experimental work will soon clarify the position of nicotinic acid in the treatment of this condition.

VITAMIN C

The relation of Vitamin C to scurvy has long been established. Lesions of the mouth are remarkably constant in cases of scurvy but occur only when teeth are present and are most severe about deformed and broken teeth. The gums become swollen and boggy, and bleed easily. In severe cases, swelling actually may hide the teeth, making mastication painful and difficult. Rarefaction of the alveolar base occurs and results in loosening of the teeth. Disintegration of the epithelium may follow with infection, ulceration, and

even gangrene. In the teeth of adults suffering from scurvy the dentine becomes resorbed and porotic. Atrophy, hyperaemia, degeneration of odontoblasts and formation of small cysts and foci of calcification occur in the pulp. The cementum is also affected.

It is well to remember that in vitamin C deficiency the signs of scurvy appear first in the mouth. Changes occur in the gums before lesions appear in any other part of the body. However, it is by no means certain that vitamin C deficiency plays a major role in the causation of gingivitis in this country. Undoubtedly, vitamin C is effective in the treatment of gingivitis occurring in cases of vitamin C deficiency but, on the other hand, large doses of vitamin C have been administered to an experimental group of patients suffering from gingivitis from other causes without any beneficial effect being observed.

The exact relation of vitamin C to dental and gingival disease in man is still not known but one may safely say that an adequate intake of vitamin C is necessary for normal tooth development and for the maintenance of healthy gums.

VITAMIN D

Although oral examination may reveal some evidence of past vitamin D deficiency, the condition is best recognized by manifestations in other parts of the body. A diet deficient in vitamin D gives rise to rickets, a condition in which the calcification of growing bones is defective. In the mouth, signs of rickets may or may not be present. Enamel hypoplasia is frequently associated but the relation of D deficiency to dental caries is still not firmly established. There is some evidence that the administration of vitamin D during childhood, particularly in the early years, reduces the incidence of dental caries, but the fact that many children with a perfect nutritional

background still develop dental caries indicates only too well that the caries problem has not been solved by nutritional means alone.

VITAMIN K

The discovery of vitamin K should be of definite interest to the dentist since this factor is of great value in the control of certain forms of post-operative haemorrhage. Vitamin K is essential for the maintenance of a normal concentration of prothrombin in the blood, without which normal clotting does not occur. A low prothrombin level is found in the blood in cases of obstruction of the common bile duct in some types of jaundice and in association with extensive intestinal lesions. Such cases for years have been known to be bad operative risks because of haemorrhage. The presence of a low prothrombin level is now easily determined and, when established, the administration of vitamin K with bile salts will restore the normal clotting time.

SUMMARY

From the above observations, it is evident that oral lesions play no small part in the manifestations of vitamin deficiency. Such lesions in the mouth are often the first clinical sign of dietary imbalance and, although frank cases of vitamin deficiency are rare in this country, the dentist occupies a unique position as early observation and treatment may restore health before severe illness supervenes.

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Conventions

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STEVENS HOTEL, CHICAGO, FEBRUARY 17-20, 1941.

MINNESOTA STATE DENTAL ASSOCIATION, MINNEAPOLIS, MINN.,
FEBRUARY 25-27, 1941.

WESTERN CANADA DENTAL SOCIETY, EDMONTON, ALBERTA, ABOUT JUNE 1, 1941.

Every household should contain a cat, not only for decorative and domestic values, but because the cat in quiescence is soothing to irritable, tense, tortured men and women. Few human beings understand the art of repose. They cannot let go. But when the cat decides to rest, he not only lies down, he pours his body out on the floor like water. It is reposeful merely to watch him

The cat has an acute mind, an inflexible will, and a patience almost divine. If the cat wishes to leave the room, he makes no fuss about it and does not annoy you with vocal importunities; he selects a position near the door. He knows that opportunities come to those who are ready. He pretends he has dismissed the matter from his mind; but when someone happens to open the door, the cat departs.—William Lyon Phelps in "Autobiography."

An Historical Outline of Dentistry in the British and Canadian Forces

by FRANK M. LOTT, Colonel—Canadian Dental Corps

THE present status of any group is the result of slow, intermittent, and sometimes painful progress by steady, persistent effort of devoted members. Dentistry is no exception to this rule and the realization of this fact makes interesting a study of those other days, the conditions and events of which have shaped our professional course to date. In these troubled times, when much attention is being paid to the armed forces, perhaps it will be interesting to outline briefly dental conditions and dental treatment in the British and Canadian forces of yesterday.

The first reference to dentistry dates back to 1626 when there was no standing army and an armed force was raised by contract for the duration of a campaign. Charles I authorized a medical chest as a free issue to surgeons of an expedition against France. The following dental articles were included and may fairly be considered the first dental kit.

Paces	)	
Pullicans	)	various type of
Crowes bills	)	forceps
Forceps		—Elevators
Punches		—Chisels
Flegmes		—Periosteal elevators
Gravers		—Scalers
Files		—Files

The opinion of that day regarding dental treatment is well expressed by the following description by John Woodall, Medical Supervisor of the forces. (1)

"All these recited instruments, and each of them, are needful in the surgeons chest, and cannot bee well for-

borne for the drawing of teeth, forasmuch as the cleansing of the gums' bloud are often no small things for keeping men in health, and sometimes doe save the lives of men both at sea and land. For we see that from an Apostume begun under a rotten or hollow tooth, for want of drawing of the same, sometimes proceedeth great swellings in the face, or in the Amygdals and throat, and the party is suffocated and dieth."

The standing army was formed in 1660. It consisted of 5,000 men only. An infantry unit at this time was composed of about 300 men; one-third pikemen and two-thirds musketeers. These musketeers carried the charges of gunpowder in bandoleers. These were little wooden tubes, four inches in length, that were slung on a shoulder strap. In reloading, it was necessary to pull off the cap of the bandoleer and pour the powder down the muzzle of the musket. The regulation method of removing this cap was to use the anterior teeth. In fact, the actual commands were as follows:

WORDS OF COMMAND

No. 21 "Open them with your teeth."

Explanation

"Bring the charger to your Mouth, pulling off the Cap with your Teeth and the help of your Thumb."

WORDS OF COMMAND

No. 22 "Charge with powder."

Explanation

"Bring your charger to the Muzzle, turning it up, pouring the Powder in the Barrell."

Thus, while there is no direct mention made of a dental standard, there was certainly an inferred one because, obviously, a soldier could not be fit for duty as a musketeer if he were minus anterior teeth.

Before 1700, the pikemen disappeared with the introduction of the bayonet. From that time on, all infantrymen carried muskets and all had to meet the inferred standard. About the same time, grenadiers were introduced and they, too, had to be in possession of anteriors to open the fuse of the grenade. This use of the teeth persisted for grenadiers until grenades were discontinued in 1810; for infantry, until 1865 when the breech-loading mechanism rendered the practice obsolete.

In the nineteenth century dentistry seems to have drawn a little more attention and some progress was made. For instance, in 1821, soon after the first instructions were issued for the medical inspection of recruits, the first mention was made of defective teeth as a cause for rejection. In 1857, medical officers were instructed to conserve teeth and were issued with a very inadequate kit that we are told was used but seldom.

At the beginning of the South African war in 1899, there was no plan for dental treatment. Mr. Pedley of Guy's Hospital went out for six months as an honorary dental surgeon with a unit and made the following report on his return: (2) "Disease, neglect, tough beef and hard biscuit play havoc with the teeth. Nothing is done to preserve the soldier's teeth whilst he has any, and when they are gone, he must go home as a man unfit for service." This was true to such an extent that 1.2% of the entire personnel was invalidated to England for dental reasons only. As a result, the British Dental Association secured the appointment of a few contract dentists. With some changes and increases, this contract method of treatment was used up to the

outbreak of war in 1914.

Again, no provision was made for treatment in the field and no dental officer went to France with the Expeditionary Force. By the end of 1914, however, a few dental officers were in France and the end of the war saw 800 in service at home and in the field. In 1921, the Army Dental Corps was formed to provide comprehensive treatment for a soldier throughout his service.

From the outbreak of war in 1914, it will be interesting to follow the development of dentistry in the Canadian forces. This will be very familiar to the many readers who participated in the activities of the Corps of those days and need be described but briefly for this reason. In August, 1914, the dental establishment of the Canadian Militia consisted of twenty-six dental officers of honorary rank attached to various units of the Medical Corps. This system prevailed at Valcartier and four dental officers proceeded overseas with the First Contingent.

In the face of the thousands of rejections for dental reasons, however, the military authorities in Canada quickly made a very radical decision and formed the Canadian Army Dental Corps in May, 1915, as a separate service directly responsible to the A.G. This autonomy was maintained in Canada and England but in France, the British Army dental establishment was adhered to even in the face of considerable criticism and dental officers were detailed to Medical units only.

Order followed Order as the service was amplified in Canada and then was extended to England and France until by the end of the war, there were on strength 435 officers and 904 other ranks, a total of 1,339 all ranks.

An authoritative comparison of the Canadian Dental Corps with that of the entire British Forces is given in the following extract from a report by the Brit-

ish Dental Association to Sir Auckland Geddes, the Minister of National Defence, in October, 1918, (3) "In numbers alone, the fact that the whole of the British forces have only a little more than twice the number of dentists belonging to the Canadian Army Dental Corps is surely very significant, and as regards organization and administration, the inferiority, as compared with the Dominion forces, is equally manifest to those who are familiar with the details." Such was the status enjoyed by the C.A.D.C. at the end of the war. When hostilities ceased, all ranks of the forces were given post-discharge dental treatment and then the C.A.D.C. itself was demobilized and ceased to exist as a war unit.

In 1920, the Canadian Dental Association presented a resolution to the Militia Department requesting that the C.A.D.C. be perpetuated as a separate service in the Active Militia. No attention was paid to this resolution as far as the Permanent Force was concerned.

It was decided that the dental requirements of this group could best be met by having civilian practitioners render the treatment.

In the case of the Non-Permanent Active Militia, a General Order was issued in 1921 to establish the Corps on a suitable peace-time basis. Dissension existed, however, and after a time, the administration was taken over by the Medical Corps on the same basis as the British establishment. There was no training program of any kind. The attached dental officers merely went to Camp without any other ranks and rendered emergency treatment only. Such was the situation when the Military Committee of the Canadian Dental Association began its investigation in 1938. The story of the report that was rendered by this group and the action taken by the Department of Defence before and after the outbreak of the present war is now well known to most members of the profession.

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If you are interested in Public Dental Health problems read the article entitled, "Good Looks for Mothers and Daughters," which appears in the January issue of "Parents Magazine" and which was approved by the Dental Information Bureau representing the leading dental societies of New York and New Jersey.—Editor.

If it be true that "hunger makes the best sauce," it is equally correct to say that happiness is the best digestive.

Recent years show an undoubted increase in cases of ulcer of that part of the digestive tract known as the duodenum, and the reason for such ulcers is found in the altered chemical reactions of the digestive secretions, which in turn is traceable to the fact that the victims of such conditions have been leading over-anxious lives, over-driving themselves until the digestion becomes permanently out of order. Permanent, that is, as long as the anxious attitude of life continues. Real mental and physical rest will work wonders.—R. Macdonald Ladell, M.B., in the "Psychologist."

Acrylic Resin as a Denture Base *

by FELIX A. FRENCH, D.D.S., Ottawa, Ontario

ACRYLIC Resin is not a new discovery, it has been known for many years and was used industrially for a number of years before it was introduced as a Denture Base.

If we believed all the advertising claims and statements of enthusiastic salesmen sponsoring this resin we would be convinced that the Ideal Denture Base had at last arrived, but such is far from the truth.

An ideal base material should meet all the requirements. Acrylic resin meets only some of them. It has some very good features and some very bad ones as well.

It is easy to work and easy to repair, has ample strength, its colour is good and does not change. It takes a beautiful finish and holds it, is tasteless and odourless, non-irritating to the tissues and reasonably light in weight, can be used for full or partial cases and when purchased in bulk is reasonable in cost.

Like most other fairy tales, however, this one is also too good to be true.

One vital requirement of the ideal base is that the finished denture should fit just as accurately as the impression did and this is where our acrylic fairy tale ends. We cannot do it with acrylic resin. To understand why this is so we must consider the properties of the resin itself. These properties are well established through wide industrial use. In industry this material is used in the fully condensed (polymerized) form, or in the rounded granules, powdered form. When heated for moulding it has a fairly high thermal expansion with a corresponding contraction when reverting to the cold hard state.

In dentistry we use it in a little different manner which further complicates our problem of misfit. Either the manufacturer or the user mixes a liquid with the powder to produce a plastic mass which is more easily pressed or moulded in the flask. This liquid, called a Monomer, is made of the same chemicals as the powder; it is in fact the same thing as the powder but in liquid form. When sufficient heat and pressure is applied to it it becomes hard or polymerized but in doing so loses about 20% of its bulk. Therefore when we mix one part liquid to three of powder, as recommended, we must expect, after curing, a 5 or 6% shrinkage plus the other factor of thermal expansion and contraction.

The liquid does not dissolve the powder it merely acts as a plasticiser; the grains become soft and jelly-like. When these jelly-like grains are pressed in the flask they may be flattened out into discs. Each of these discs has a strain pulling it back to its original form. This is known as Elastic Recovery Strain. These strains are harmless while the denture is cool and hard but when it is heated sufficiently to soften the resin they can and do express themselves. This is why dentures warp when placed in very hot water or when repaired or rebased.

Acrylic resin is reputed to be very hard on teeth; the case may come out of the flask with one or several checked teeth. A great variety of techniques have been advocated in attempting to overcome these objectionable features.

It would appear that when the plastic mass is given the most complete condensation (fully polymerized) the resin will

* Presented before the Eastern Ontario Dental Association Convention at Ottawa, October 15, 1940.

have the best mechanical properties, but the shrinkage will be high and the fit impaired, the spaces, however, thus created around the teeth will reduce the strain or torque which produces the breakages. On the other hand, a shorter cure, especially at a lower temperature will give less shrinkage and a better fit

but the resin will cling more tightly to the teeth and give a higher percentage of checked teeth.

In spite of all its faults it probably is the best material we have at the present time.

The Ideal Base has not yet arrived.
111 Metcalfe Street.

President's Address, Eastern Ontario Dental Association Convention

by E. B. SPARKS, Kingston, Ontario

IT IS customary for the incumbent to thank you for honouring him as president of your association. But this year, it is more than a thank you. There is a certain amount of sentiment attached to it. My father was not only a past president but was one of the last of the charter members. He always stressed the advantages of attending dental conventions, not only from the professional side of clinics and papers, but to learn to know one's fellow practitioners in one's district, renewing old friendships and also making new ones.

When your executive, last April, chose October 14 and 15 for the convention, they did not know one of those dates would fall on a holiday.

Today is Thanksgiving Day. What better day could we choose? It is a fortu-

nate thing that we can welcome you to the even and quiet life at a time when our fellow practitioners in so many parts of the world are carrying on in war atmosphere. For that good fortune, we have to thank our geographical location and the power of the British arms. In return, we are determined to do all in our power to preserve the liberties which we are permitted to enjoy.

Before our eyes, there is always the flaming question "What can I do to help?" We can, all of us, by our every action, our every endeavour, in our physical, and moral, and spiritual being, be keyed to the note which is dominant in our life today. May we prove worthy of our high calling.

October 15, 1940.

We should not undervalue the influence of a small group of superior people in a town or a nation. Civilization has not been built up by mass movement. It has been developed by great individuals and small groups of high-quality people.

A single diamond may be worth more than a whole train-load of coal, and there is the same difference in the value of individuals.—Herbert N. Casson in the "Efficiency Magazine," per Medley.

Nitrous Oxide Analgesia in Dentistry*

by W. L. DURANT, D.D.S., Vankleek Hill, Ontario

WITH all the available information that we have at our disposal, through dental literature, it would be folly for any member from the rank and file of general practitioners to attempt here to enlarge on that information. I shall therefore discuss briefly the value to dentistry of nitrous oxide analgesia, and offer you any benefit from my past three years' experience.

Admitting that I did use nitrous oxide and oxygen for some 13 years previously, for general anaesthesia only, I believe it is quite safe to say that one does not require any extensive knowledge of gas anaesthesia in order to use the present analgesors with great success and safety, in order to alleviate pain in a large part of one's operative work.

The patient's fear of pain is the cause of one of our greatest hazards. A small number of patients may be callous, or appear so, but most are concealing, or attempting to conceal, fear. The greater number of methods we have to alleviate pain, the better we can establish the patient's confidence in us, and the better we can accomplish our work.

Analgesia is the stage in which the patient is conscious yet insusceptible to pain. Generally speaking, I find this statement to be true, but with some exceptions. It fails to produce the desired effect in perhaps 5 per cent of cases. Some will go into the excitement stage of anaesthesia without passing through the stage of analgesia. But for the great majority of patients it works beautifully, and those who have experienced successfully self-administered nitrous oxide analgesia in

my practice always ask for it the next time.

Nearly all of my grinding, drilling, preparation of cavities and abutments, scaling, etc., is carried on while the patient administers the gas. Many easy extractions, also, are accomplished in children's deciduous teeth. While it is not advocated for extractions in adults, I have quite often used the analgesor to bring the patient barely into the first stage of anaesthesia in order to remove a badly abscessed tooth which is accompanied by swelling. But I would not advise this procedure except in the hands of one thoroughly familiar with nitrous oxide anaesthesia. When using a local anaesthetic analgesia eliminates the fear of injection.

The analgesor should be kept at all times right behind the chair ready for every patient if necessary, and where the dentist can reach it without taking more than a step. If placed at some distance from the chair it will become an inconvenience.

While discussing analgesia with some of the men at the recent Montreal Convention, I found that one man, who does not use analgesia, alleviates pain in cavity preparation by using a constant stream of water flowing onto the rotating stone or disk. His work is mostly gold inlays, and all cavities are prepared with only stones and disks. So this method would not be practical for everyone.

Other dentists claim to perform painless drilling by using a local anaesthetic, but the thought of a needle piercing the soft tissues, accompanied by fear and

*Presented to the Eastern Ontario Dental Association Convention, Chateau Laurier, Ottawa, October 15, 1940.

shock, and followed by that paralyzed feeling, terrifies many patients. So why subject the patient to this much discomfort if you can avoid it through analgesia. However, there are those patients for whom analgesia is contra-indicated.

I do not attempt self-administered nitrous oxide with patients under seven years of age, but in some cases administer it myself for easy deciduous extractions.

In pregnancy analgesia gives the usual gratifying results, and I make no allowance for such patients.

Asthma patients are not desirable yet I have found exceptions who use the analgesor with success.

Pneumonia and epileptic patients are definitely contra-indicated.

Cardiac patients—I have had this type use analgesia successfully—but severe cases might be contra-indicated.

Nervous breakdown patients: Just a few days ago I had a school teacher in her 20's, who had returned recently from a four month visit to the Brockville Sanitarium. She is now completely well and I proceeded in the usual way to prepare her for analgesia. When I mentioned that it would produce a numbness, she immediately objected and said, "O my no, if it does that I don't want it. You know, when I was being treated at Brockville, my nerves were so wrecked, my whole body was numb, and I was stiff from head to feet for a long time. It was one awful feeling and I never want a recurrence." So, I decided to take no chances and prepared two cavities under a nerve block.

Defective respiration: Patients with bad head colds or mouth breathers prove a failure and are contra-indicated.

And now for a few hints toward preparation and administration. Certainly the patient must be put into the right frame of mind. This can be done in from two to five minutes, varying according to:—

1. Whether or not the dentist is con-

vinced of the value of analgesia and possesses the necessary self-confidence.

2. The patient's faith in the dentist.

3. The psychology possessed by the dentist.

4. Salesmanship ability, and knowing just what to say to each patient.

Now there is no set rule, but I usually start off by explaining analgesia, its effect, what to expect, and with a few comforting remarks, reassure the patient that he or she will not lose consciousness at any time, but will watch me while I work, and there will be no ill effect.

Have the patient relax, absolutely. With the inhaler in place and made definitely comfortable, practise nasal breathing with mouth closed, for ten seconds, then with the mouth open for ten seconds. Insist upon the open mouth being a blank and that all inhaling and exhaling must be done through the nose. Should the patient fail at this point, hold a hand mirror before his face and say: "Do you see that rubber bag at the back of your head? Well, I want you to inflate it full and deflate it, breathing through the nose. There! Now you have it. That's perfect. Couldn't be better." Praise him, and away you go, turning on a very small dosage at first, gradually increasing until the patient feels a slight numbness, or a general tingling throughout the body. You start to work, gently at first, inquire if painful, and if so, wait for 2 or 3 more inhalations. Increase dosage to medium on the dial if necessary and proceed.

Practice makes perfect, and although this detailed technique of administration might seem to some of you too much time wasted, it soon becomes only a matter of a few minutes to get working under analgesia. Those few minutes used up at first are easily regained five-fold while operating. It is not uncommon for me to prepare, for patients from a distance, eight or nine cavities at one sitting.

Now this is where the dentist gets pleasure in his work. One patient, a husky fellow of 33 years weighing 230 pounds, at the end of the fourth and last cavity preparation, hands me the bulb and says, "Look, Doctor, do you see that chimney over there? Well, when that chimney leaves the roof and rises into the sky, and you see several feet of daylight under it, that's perfect analgesia and you can drill all you like."

Another man, a chemist, formerly from England, and quite accustomed to his daily 'sip' adds a little humour while I work. I had told him, during preparation, that he might feel as though he had taken about four Scotches in succession. He said, "That ought to be all right, I happen to know what that's like." Half

way through the preparation of some cavities, I asked, "How are you coming, Jim?" He said, "Not bad, Doctor, I can feel it a little though it doesn't hurt, but I haven't reached the stage of the fourth Scotch. So far, I've only had two."

Innumerable encouraging remarks are made by the many patients who experience self-administered analgesia and need you ask, "Is it a practice builder?" My answer is, "Yes, indeed, I would not practise today without it."

Anyone who acquires success with analgesia will find that the time used up at first, the initial expense and upkeep is small compared to the many valuable returns, for it can become one of the dentist's greatest assets.

Lincoln's Gettysburg Address.

Fourscore and seven years ago our fathers brought forth on this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting-place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

But in a larger sense we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it far above our poor power to add or detract. The world will little note nor long remember what we say here; but it can never forget what they did here. It is for us, the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us: that from these honoured dead we take increased devotion to that cause for which they gave the last full measure of devotion; that we here highly resolve that these dead shall not have died in vain; that this nation, under God, shall have a new birth of freedom; and that government of the people, by the people, for the people, shall not perish from the earth.

Age doesn't matter. Mozart gave concerts when he was six, and Michelangelo completed his greatest work at 87. Goethe began to write at the age of 10, and finished his masterpiece, Faust, at the age of 80. Leonardo da Vinci was 77, when he painted his famous "Last Supper." Joan of Arc became the heroine of France at 16; at 40 Cromwell was still an unknown farmer. Lord Kelvin made his first scientific discovery when he was 18, and invented improvements to his marine compass when he was 83.—Herbert N. Casson.

Gangrenous Stomatitis

by HAROLD TROTTER, B.A., D.D.S., Brandon, Manitoba

REPORT of case from Hospital for Mental Diseases, Brandon, Manitoba, with accompanying photographs.

Clinical History. H.M., an adult female, white, married, aged fifty-one years, of medium height and weight; hospitalized for seventeen years; diagnosed as Schizophrenia.

On June 16, 1938, the patient was obviously ill; poor appetite; vomiting; some incontinence of urine; temperature normal.

Laboratory Data. The urine contained a large amount of albumin. Blood examinations revealed a moderate secondary

examination was made by dentist.

Dental examination revealed edema of lips, with a greyish-black, soft, pellicle covering the mucous surfaces of lips, buccal tissues, gums, and tongue. The pellicle was easily removed, leaving a clean but sensitive surface. The sloughing tissues emitted a stench. Temperature was 99°F. Smears and specimens of the sloughing tissues were made for laboratory tests. Hypertonic saline gargle or irrigations were prescribed.

August 2, 1938. Temperature unchanged.

Laboratory Data. Smears indefinite, numerous fusiform bacilli with occasional spirochetes.

Histopathological findings. Slough composed of bacteria and necrotic tissue.

Diagnosis. Gangrenous stomatitis.

Treatment. Neosalvarsan prescribed, although kidneys were badly damaged.

During the following week, laboratory tests revealed an increase in the number of bacteria and greater destruction of



Figure 1

Onset of disease. Edema of lower lip.

anaemia. Blood urea was 97 mg. per 100 cc. (normal 10-20 mg.).

Diagnosis. Acute Nephritis. The patient was treated accordingly and progressed favourably. Vomiting decreased, but temperature occasionally reached 99°F.

On August 1, 1938, patient refused food. On request of physician mouth



Figure 2

Sloughing of superficial tissues of lips.

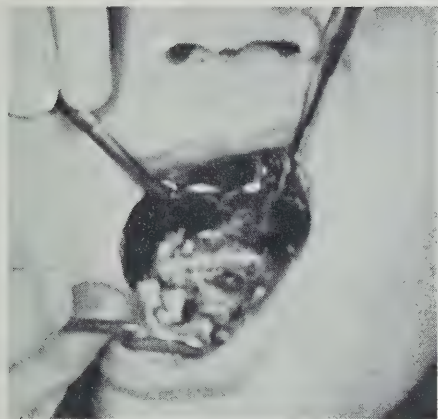


Figure 3

Anterior one-third of tongue has sloughed away. Picture taken one week prior to death.

tissue. Each day, a large amount of necrotic tissue was removed. The hypertonic saline gargle was discontinued in favour of potassium chlorate gargle. Photographs of the mouth were made frequently to show the progress of the disease.

August 14, 1938. The patient reported "feeling better". She was more co-operative. Temperature 99°F. There was very little sloughing of the oral tissues.

August 16, 1938. The patient complained of great difficulty in swallowing. Her respirations became quite laboured.

August 18, 1938. Death occurred.

COMMENT

This case is of considerable interest because it represents a composite picture of disease. Let us consider, briefly, each disease in sequence.

1. The primary disease is Dementia Praecox or Schizophrenia. "Schizophrenia is a common mental disease in which there is a serious distortion of the patient's attitude to the environment, (delusions,

hallucinations), and peculiar distortions of conduct, e.g. impulsive actions, bizarre attitudes, stereotyped repetitions." (1)

This type of mental disease often causes marked habit deterioration, including personal cleanliness and oral hygiene. The patient under discussion had the habit of holding saliva and vomitus in her mouth for long periods of time. Masses of food debris accumulated about her few remaining teeth which were loose. The continuous acid fermentation in her mouth was responsible for an acute gingivitis. This brought about a debilitation of the oral tissues.

2. Superimposed upon this mental disease is acute nephritis. This disease causes a malfunction of the kidneys and waste products accumulate in the tissues of the body. As a result, the patient suffers a general debility. The tissues are unable to cope, normally, with an infection because of lowered resistance.

3. Gangrenous Stomatitis completes the picture. This demented, deteriorated, debilitated patient, has little or no resistance against disease. The result, as far as the mouth is concerned, is a widespread necrosis of the oral tissues.

Certain important and detailed parts of the clinical history, physician's report, and laboratory data, have been purposely omitted. The main object in presenting this case is to give the syndrome of gangrenous stomatitis, together with the accompanying photographs.

I am grateful to Dr. T. A. Pincock, Medical Superintendent, for permission to present this case. I am also indebted to Drs. Creasy and B. Bird of the medical staff for their invaluable advice; to Miss Reta McCulloch, R.N., M.T., for laboratory examinations; and to Mr. Alfred Morley for photography.

REFERENCE

- (1) Outline of Examination, P. 11. Harvard Medical School.

Practice Management

Psychology in Medicine and Dentistry

by DOROTHY B. NYSWANDER, PH.D., Director of the School Health Study, Neighbourhood Health Development, Inc., New York City.

Excerpt from N.Y. Journal of Dentistry.

THE dentist must show he understands that individual differences in patients call for individual treatment methods; at least as far as his own psychological adjustments to the patient go. Certainly the adult who sees himself as a courageous individual does not want to be admonished "don't be afraid." He wants commendation and approval. The helpless person needs repeated assurances that all is well; the self-pitying person wants personal interest in his problems. Such discrimination in tactics is artistry in attractive advertising. How well some advertisers know how to play on human fears. Fear of pink gums, of halitosis or not finding a boy friend because your teeth don't sparkle—these fears coupled with a woeful lack of accurate information drive patients to the drug store instead of to sources of reliable advice.

The patient is afraid, too, of the instruments that often lie exposed before his gaze. "Will the dentist use this one—or that one—or maybe he'll have to use all of them"—he thinks to himself and cringes. He dislikes the glaring light that sometimes blinds him—he dreads the sound of the drill; he slips uneasily back and forth on the uncomfortable leather chair; he hates having his head thrown back for it makes him utterly helpless. Lying there with a rubber dam in his mouth—he listens to the dentist talking

over the telephone about a committee meeting. He feels neglected. Is this what he is paying for? He works up an inner frenzy. He wonders if after all he has made a good choice of a dentist. Finally it is over. He has a crick in his neck—he feels as though he had been tossed in a blanket. But he is glad it is over—so glad that without a word he rushes from the office. Will he come back? Yes—when he is worried about his teeth again and if the personality of the dentist and his good work are sufficient to overcome handicaps like these. Will the well person come back in a few months? That is another question.

Certainly individual therapists must exert themselves more than they have in the past to selling their preventive stock in trade. Especially in the therapy of young children should the new regime start. For with children it is possible to develop attitudes toward the physician and dentist which are the fertile ground for preventive work. Surely, if the next generation continues as does this one, to follow medical guidance received over the radio or through the press, the professions are going to be blamed equally with the educational system for failing to devise ways of educating the lay person to seek advice, when well, from professional sources.

In a rapidly ascending balloon were two men. One watched the earth getting farther and farther away. One watched the stars getting nearer and nearer.—George Jean Nathan.

Ultimate Success

THE ablest and the mightiest have their setbacks and their disappointments. Generals have lost battle after battle, yet won out in the end. Big business men have reached their goals after a series of commercial disasters. Star salesmen have lost many big orders. The man does not live who always wins, but the man who ultimately wins brushes aside temporary failures and goes ahead with the indomitable will that cannot be defeated.

Victory is a composite of many cam-

paigns. Success is a summation of many incidents. You can look on a failure as a temporary episode on the road to fortune, or as an insurmountable stone wall forever blocking your progress. You can take a blow to the jaw and let yourself be counted out, even though you might through a supreme effort have continued—and won. Yes, you can come back if you have a stout heart and really want to. —*Ten-Test News, per Canadian Business.*

Ask Yourself

1. What progress have I made professionally in the past year?

2. Am I keeping abreast of the times and advances in my profession and business methods?

3. Have I attended meetings and clinics as I should?

4. Has my work been improving, or am I slipping?

5. Am I holding my old patients as I should, and am I attracting new ones to

me?

6. Are my business methods efficient and respected by my patients?

7. Do I belong to the commercial or business men's club of my community, and accept my civic responsibilities on an equality with them?

8. Am I as enthusiastic about my profession now as I was when I stepped into my office for the first time? — *Cal. Magazine.*

Many of the great achievements of the world were accomplished by tired and discouraged men who kept on working. That thought may encourage you, if you have a hard job that seems to be wearing you down.

Wasn't Elias Howe tired and discouraged when, after he had invented the sewing machine, no one would buy it? He went through ten years of poverty. He had to become an engine-driver to support his family. But he kept on and at last won fame and fortune.

Wasn't Columbus tired and discouraged when he had sailed west for 69 days and found no land—when his sailors were insisting that he should turn back? But he kept on, and on the 70th day he discovered a new continent, and became famous as the greatest navigator of all time.—Efficiency Magazine.

"The old order changeth"—yes, but we ought to be able to preserve beauty and dignity, and the sense of service and manners—things that have come very slowly, and can be made to vanish very fast if we aren't set on preserving them somehow.—Galsworthy.

Problems in Practice

Our readers are invited to send in their problems in practice to the editorial office, 314 Somerset Building, Winnipeg. These questions will be submitted to prominent dental authorities and their replies sent to the one asking the question. The more interesting subjects will be published in this section of the Journal over the author's name unless otherwise requested.

PROBLEM FROM SASKATCHEWAN:

A child, three years of age, was brought to my office yesterday and upon examination it was found that only the two second molars on either side of the mouth were in contact. The remaining teeth appeared to be eroded to the gum level presenting smooth black surfaces. The apices of the lower centrals protruded through the alveolus, the lower quarter of the roots being exposed.

The incisor teeth erupted at the age of four months and the remaining teeth erupted soon afterwards. The child has had a good diet containing fruit juices, cod liver oil, etc., since birth. He has not complained of toothache. The gums are healthy except around the lower centrals. He weighs 35 pounds and appears healthy. This erosion was first noticed at the age of one year.

I would like to know the answer to the following:—

1. Should the lower centrals be extracted? If so, will this cause any shortening of the mandible? If they are not extracted, will the roots be absorbed normally?

2. Should the 2nd molars, which are in fairly good condition, be left in since the child cannot bite or chew at present, on account of the fact that these 2nd molars are the only teeth which occlude. All his food has to be ground for him.—
H. S. Jamieson, Moosomin.

REPLY FROM NOVA SCOTIA:

1. Yes, I think the lower centrals should be extracted. They are a continuing source of irritation in their present condition. It would be a rather rash statement to say that this extraction either will, or will not, cause shortening of the mandible. We do not know enough about the laws of growth of the mandible to be definite on that. No, I think it most improbable that these central roots would be absorbed, the whole tooth eventually being exfoliated.

2. I can see no reason for extracting these second molars. So far as chewing is concerned their presence may make them almost worse than useless, but think that they have some value in preserving the relationships of the jaws. It may appear desirable at a later date, when the permanent teeth have partially erupted to remove them, but that is a matter for the future.—*J. Stanley Bagnall, Halifax.*

REPLY FROM BRITISH COLUMBIA:

Sufficient data has not been given to fully answer the questions asked.

The answer to the first question depends on the findings of roentgenograms which apparently were not taken.

If the incisors erupted at four months and the remaining teeth erupted "soon afterwards" the premature eruption of

the deciduous teeth might suggest the very early eruption of the permanent. If this possibility is confirmed by roentgenographic findings then I would advise extracting the two lower centrals. The extracting would not cause any "shortening of the mandible," though the too early removal might retard the full development of the mandible. The roots in this case would not be absorbed normally.

In answer to the second question, I would advise the retention of the deciduous "molars" for a considerable time.—*Emery Jones, New Westminster.*

REPLY FROM ONTARIO:

It is my view that the lower centrals should be extracted so that the soft tissues can assume normal health. This may retard the lateral growth of the mandible but could easily be corrected later. I do not believe the roots of these incisors will absorb normally.

In regard to the deciduous second molars, I certainly would retain these to maintain vertical dimension. I would x-ray the remaining deciduous teeth to decide the presence or absence of infection. I would remove apparently infected teeth and retain the others under observation.—*T. R. Marshall, Toronto.*

REPLY FROM ONTARIO:

FIRST QUESTION — Should the lower incisors be left in the mouth? I would say no for two reasons: (a) This area would probably be a site of focal infection; (b) In all probability they would be sore to bite on, thus hindering normal biting and mastication. In the second part of this question, "Will extraction cause shortening of the mandible?" I would say that one might expect lack of development due to the absence of func-

tion, but if the teeth were left in you would probably have two forces acting against normal development; namely, infection and lack of function.

SECOND QUESTION—Should the second molar be left in position and restorative work done? From this question I would understand x-rays had been taken and that the prognosis was favourable. Then by all means save these teeth.—*S. A. MacGregor, Toronto.*

REPLY FROM MANITOBA:

In my opinion, this problem presented by Dr. Jamieson is a very serious one for the future of this child.

It would be very difficult to give a hard and fast opinion without a model of this child's mouth and a complete x-ray, as the question of how many, if any, of these teeth are non-vital is very important.

The questions asked, first, Should the lower centrals be extracted? I would say yes and especially if, as I would expect, these teeth are not vital. The extraction of the teeth will not cause any shortening of the mandible. If the teeth are dead the roots will not be absorbed but the teeth will likely be exfoliated.

The second molars must at all costs be retained. To extract them will certainly cause shortening of the mandible and lend to possible impaction of the bicuspids.

I would suggest onlays on the first molars, cuspids and laterals to bring the bite up to normal. If the teeth are very short make a band to fit just under the gum and make the wax model in that or cast with a low-flowing metal like Acolite right into the band and cement on. The serious thing in this case, to my mind, is the end result which, of course, is the position and bite of the permanent teeth.—*B. L. Toombs, Winnipeg, President, Winnipeg Dental Society.*

The Forum

• PROFESSION

by JOHN OPPIE McCALL, D.D.S.,
New York, N.Y.

(Excerpt from address entitled, "Good Teeth—Good Health," delivered for the State Teachers College for Women during the Dental Centenary Celebration in Baltimore.)

PERHAPS I should define for you what we mean by the word "profession," since this is the one hundredth anniversary of dentistry as a profession. The word means essentially the possession of *knowledge*. But this is not all; a profession is made up of men and women who place their knowledge at the service of their fellowmen. Keep in mind this two-fold implication of the word: *service* and *knowledge*. In this connection, too, the word *service* has a broad meaning. It implies not only direct application of knowledge to the needs of others but the imparting of that knowledge to those who wish themselves to become professional people. We have come to separate these meanings in practice, however. Hence we have the professor in the college who devotes his life to teaching, and the physician, the lawyer, the clergyman and the dentist who devote their lives to ministering to the needs of those about them.

Always there is inherent in the term "profession" the willingness of the professional man or woman to pass on to others in his profession or those who wish to enter it, the knowledge he or she has gained as a result of study. There is no such thing as a trade secret in a profession.

Another thing that has come to be tied up with the conception of a profession is the obligation of the professional man to deal honourably with those who seek his services. These services are the things of the mind, not merchandise such as dress

goods, food, automobiles, radios, etc. These latter can be examined and tested before the purchase is made. Not so the professional service. Even when the dentist performs so material a service as placing a filling in a tooth, it avails the patient nothing to know that the gold or the amalgam he uses has been approved by the United States Bureau of Standards as is usually the case. What counts is the dentist's knowledge of cavity preparation and manipulation of the filling materials, his conscientiousness and skill in removing all decay and in performing the other steps of the operation.

• TENDER TEETH: THEIR SURGICAL IMPORTANCE

by H. T. ROPER-HALL, M.B., M.D.S., M.R.C.S.
and A. P. BERTWISTLE, F.R.C.S.Ed.

THE sharp striking pain of toothache is so familiar that it is often used to describe other pains. A dental surgeon is visited and the tooth is usually extracted, which is the end. On the other hand, the tooth which is tender on chewing, clenching the jaws, and percussion, and to hot and cold water, is frequently endured by the patient as the discomfort is so mild, yet just such a tooth may result in serious trouble. It is important to realize that the tenderness may be transitory, being present for only one or two days at a time, reappearing weeks, months, or even years later. The following are some of the more important causes of tender teeth.

SURGICAL CAUSES

Cold in the Teeth.—This common condition of acute non-suppurating inflammation of the gum is of unknown origin, and rapidly subsides without treatment.

The fact that all the teeth are affected clinches the diagnosis.

Pregnancy and Lactation.—In these conditions the teeth often become tender and carious. The cause is undoubtedly the drain of calcium by the foetus and milk respectively acting on the cementum and teeth, just as Maxwell has conclusively shown is the case with osteomalacia where this occurs in endemic form in Northern China. The remedy would appear to be the administration of vitamin D.

Dead Tooth.—As stated above, the commonest fate of an aching tooth is, or should be, extraction; but a certain number of teeth that have ached settle down, take on a bluish colour, and occasion little pain apart from transitory tenderness. Such a tooth may prove to be a serious menace to health. The following case is an example:

Originally reported as a case for diagnosis (Bertwistle, 1926), it was subsequently proved to be one of subcutaneous erysipelas and published under the title "Elephantiasis" (Bertwistle and Gregg, 1928), of which disease it was the precursor. One year later a crowned tooth became tender; in spite of negative x-ray findings it was extracted, and on it was found a granuloma, which could not have been demonstrated by radiographs. No further attacks ensued until 1938, when a mild manifestation appeared, this time in the right foot and leg. Three months later another more severe attack developed on this side. Dusky patches of erythema appeared on the dorsum of the foot and over the tibia, accompanied by inguinal adenitis. The administration of prontosil undoubtedly cut the attack short. Just before the first attack a heavily filled molar tooth had become tender. Its pulp was removed and the pulp chamber filled: x-ray findings were again negative. After the second attack the tooth was extracted;

its roots proved to be stinking. No further attacks have occurred since.

It is probable that the good results following wholesale extractions could have been just as well obtained by the removal of one or more dead or dying teeth. Conversely, the failure of a condition to clear up on the extraction of an offending tooth does not prove it was not the cause; the mischief has already been done.

Affection of the Antrum.—While it is true that antral disease is often caused by infected bicuspid teeth, it is also true that inflammatory states of the antrum occasion pain and tenderness of the teeth. A negative pressure in the antrum is productive of pain on pressure on the teeth. Carcinoma of the antrum, the commonest malignant disease of this structure, results in the teeth, usually the bicuspids, becoming tender and loose; they may even be extracted before the true nature of the condition is appreciated. Straight radiography, or after the injection of lipiodol (antrograms), is invaluable.

Sarcoma of the Alveolus.—Sarcoma reveals itself in swelling of the area, looseness of the teeth, and tenderness, as exemplified by the following case:

A man aged 40 complained of a loose tooth which was tender, and of swelling of the jaw about a lower molar tooth for a period of some weeks. Examination revealed a loose tooth surrounded by a boggy swelling affecting the alveolus only and simulating a chronic abscess; the other seven teeth were carious. Extraction disclosed a large fleshy mass spreading along the alveolus that bled readily. Pain and secondary deposits were absent. (H. T. R.-H.)

Tumours of the Palate.—Anderson in an analysis of fifty cases found that only two were dental in origin, although the first symptoms were often dental.

Fractures of the Jaw.—In the absence of malalignment, fractures of the jaw may present a problem, of which the fol-

lowing is an example:

A man aged 24 asked to have a tender tooth extracted. There was inflammation and the tooth was very loose. Over the angle of the jaw was a swelling suggestive of fracture, which was confirmed by radiographs. The patient then confessed to having been mixed up in a brawl a fortnight previously, when he had sustained a heavy blow on the jaw and thought he had merely loosened a tooth. (H. T. R.-H.)

Osteomyelitis and Necrosis of the Jaws.—This condition, which is not so well known as it ought to be, should be borne in mind when a child has what looks like an alveolar abscess and a carious tooth. Removal of such a tooth during the acute phase may lead to tragic results, even death. Hankey states that there is very little discomfort before operation. Brown and Tong quote 234 cases, forty-eight being in the maxilla; they consider dental trauma to be the deciding factor. If operated upon during the acute phase acute cellulitis is prone to develop. The correct treatment is drainage, several months being allowed for the sequestrum to separate. In children it is important to preserve the teeth and teeth buds because, though involved in the diseased area, they may yet retain their vitality and become sound again. Woodward considers the condition a distinct problem for the oral surgeon since, though the principles may be the same for osteomyelitis elsewhere, radical treatment is often fraught with very serious results. Holman and Waters have each been successful with uleron, a substance allied to protosil. The fact that the whole of the body of the bone may be involved calls for extreme caution if disfigurement is to be avoided; patience is imperative. During the pyrexial stage rest in bed, free bowel action, and light diet are indicated. In the acute stage extraction of teeth is contraindicated, as this may spread the infection. Incision and

drainage are necessary when pus is localizing. In the case of the mandible an external incision, just below and parallel to the lower and inner border, should be made and a tube inserted; irrigation with eusol is beneficial. The drainage tube should not make contact with the bone, since this occasions great pain. Should the bone require opening, the lower border of the mandible should be preserved. Surgical intervention ought to be minimal, and when a sequestrum has formed time should be allowed for new bone to develop before removing it.

Cellulitis of Neck.—A case of cellulitis of the neck secondary to a microscopic abscess of a vital tooth has been reported by one of us (Roper-Hall, 1939). Jones has reported a similar instance.

Trigeminal Neuralgia.—According to Rollinson Whitaker (quoted by Colyer and Sprawson, 1938) 90 per cent. of these cases originate in the mouth and are due to a continuous stream of small irritations which eventually lead to inflammatory changes in the Gasserian ganglion. The detection of such foci may be very difficult, since a live tooth may yet be the seat of periodontitis.

MEDICAL CONDITIONS

Besides these surgical causes there are many medical conditions leading to tenderness. The effect of scurvy on the teeth is well known. Certain blood states, such as the anaemias, have been dealt with by Neal. The association of leukaemia has been studied by Love. Syphilis, malaria, diabetes, and tuberculosis have their effects on the teeth. Hysteria, migraine, and other neuroses are often accentuated by tender teeth. Many of the acute fevers, and the recovery therefrom, may cause tenderness.

MECHANICAL CAUSES

Certain dental operations, of which a filling that is too high is the most obvious; a large metal filling, causing the

tooth to be sensitive to heat and cold; injury to the teeth either by a single sharp blow or a series of small traumata; tooth-brush bristles; fish-bones lodged in a cavity or between teeth; the grinding of teeth at night; and the occupational abrasions of cobblers, seamstresses, and players of wind instruments—all these may result in tenderness.

CONCLUSION

Tenderness of teeth, while often of purely dental origin and interest, may nevertheless be of use in the diagnosis and treatment of more serious surgical and medical conditions.

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—*Br. M. Jour.*, August, 10, 1940.

• FUSOSPIROCHETOSIS (VINCENT'S DISEASE)*

by ENAYAT SHIRAZY, D.D.S., Philadelphia
Condensed from the *New International Clinics*

AFTER reviewing the aetiology, bacteriology, symptomatology, pathology and diagnosis, it becomes evident that the treatment of Vincent's infection of the mouth should consist of 3 phases carried out simultaneously. These phases are: 1, general treatment, 2, establishing adequate oral hygiene, and 3, local medication.

THE GENERAL TREATMENT: The general treatment is directed toward eliminating any systemic toxicity. This includes eradication of systemic disturbances, the intake of a well-balanced diet rich in the necessary vitamins (A, B, C, D), and the administration of suitable tonics.

In carrying out systemic treatment, the dentist is guided by the family physician. In the absence of systemic disease, atten-

tion is directed to the bowel, and to extravagances in dietary habits. The use of tobacco, alcohol and highly seasoned, spicy foods is prohibited. The diet should include fresh meats, vegetables, fruits and adequate liquids. Five grains of nicotinic acid given 3 times a day will supply a valuable amount of vitamin B.

Intravenous injection of arsenicals or the intramuscular administration of bismuth are of little value. The oral sepsis of fusospirochetosis predisposes to toxic symptoms when heavy metals are employed. Fusospirillar infection has not been demonstrated in the blood stream. It is essentially local, and has been seen among luetics undergoing heavy arsenical treatment. The intravenous route may cause unfavourable allergic complications. It is doubtful if the concentration of arsenic or bismuth in the blood or secreted in the saliva after intravenous injection is sufficiently strong to inhibit bacterial activity in the mouth cavity. The oral cavity is constantly bathed in saliva, a fact which calls for adequate concentration to attack local infection in the presence of salivary flow without damaging the tissues. Benefits derived from this type of medication are due to the not fully understood action of arsenic stimulation of the tissues, building up their resistance—not to any spirocheticidal action.

ESTABLISHING ADEQUATE ORAL HYGIENE: The golden rule when treating Vincent's infection is to delay all tooth extraction and scaling of the teeth until the acute symptoms have subsided and the patient's resistance has been enhanced. Numerous undesirable sequellae and necrosis have been reported following surgical intervention during the active stage of the malady.

The mouth is irrigated every 2 hours with a warm solution of sodium perborate, or activated zinc peroxide, or with Prinz's

* Reprinted from *Dentistry—A Digest of Practice*, Vol. 1, No. 1, per *Jour. Michigan State D. Soc.*

hydrogen peroxide mouth wash. The latter should be freshly prepared by dissolving $\frac{1}{4}$ teaspoonful of table salt and $\frac{1}{4}$ teaspoonful of borax in $\frac{2}{3}$ glass of warm water, and then adding a table-spoonful of hydrogen peroxide. The patient is instructed to swish the mouth-wash vigorously for at least $\frac{1}{2}$ minute. When the ulceration has disappeared, the teeth are scaled and polished to prepare the mouth for any necessary surgical intervention and the completion of treatment by further local medication.

LOCAL MEDICATION: The merit of oxidizing agents is limited more to mechanical cleansing than to the action of liberated oxygen. Their use in the mouth should be judicious because of the possibility of damage to the tissues. There seems to be no justification for the use of sodium perborate when its function can be better attained by the use of Prin's hydrogen peroxide wash or with activated zinc peroxide.

Zinc peroxide is an excellent and harmless oxidizing agent. It should be activated in dry heat at 284° F. for 4 hours before it is used as a paste or mouthwash. So prepared it slowly liberates hydrogen peroxide over a long period.

Aqueous solutions of iodine are most efficient because of their deep penetrative power, low surface tension, and miscibility with saliva — factors which enable the drug to enter the minute hiding places of micro-organisms. A 25% solution consists of 15 parts zinc iodide, 25 parts of iodine crystals, and 60 parts of distilled water. The writer has used this with perfect satisfaction except in allergic individuals.

When the practitioner is confronted with absolute failure because the local infection resists treatment, local application of arsenicals produces marked results. I have employed local applications of mapharsen and obtained negative smears following 3 treatments in indi-

viduals with acute symptoms. A saturated solution or powder can be used.

A new treatment, described by E. W. Fish, consists of packing the gum margins and interdental spaces with wisps of cotton saturated with a paste of zinc oxide and eugenol or oil of cloves. The dressing is left in place for 48 hours. I have found this treatment efficacious and soothing to the tissues.

The most efficacious and safe preparations for local use are activated zinc peroxide, Prin's hydrogen peroxide mouth-wash, 25% aqueous solution of iodine, mapharsen, and zinc oxide-eugenol paste.

• TOBACCO, ALCOHOL AND LONGEVITY

IN THIS group of nearly 7,000 men the smoking of tobacco was associated definitely with an impairment of life duration, and the amount or degree of this impairment increased as the habitual amount of smoking increased. The contrast between the life tables relative to the implied effects upon longevity of moderate smoking, on the one hand, and the moderate use of alcoholic beverages, on the other hand, is very striking. The moderate smokers in this material are definitely shorter lived than the total abstainers from tobacco; the moderate drinkers are not significantly worse or better off in respect to longevity than the total abstainers from alcohol.

Heavy indulgence in either tobacco or alcohol is associated with a very poor life table, but the life table for heavy smokers is definitely worse than that for heavy drinkers up to about age 60. Thereafter to the end of the life span the heavy smokers do a relatively better job of surviving than the heavy drinkers. But neither group has anything to boast about in the matter of longevity.—*The Search for Longevity*, by Prof. Raymond Pearl, *Sci. Month.*, May, 1938, p. 490, *Am. J. Pub. H.*, per *N.Y. Jour. of Dent.*, March 1939.



PRINCE EDWARD ISLAND



D. T. Wayne, Charlottetown

SASKATCHEWAN



Editor — M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

NOVA SCOTIA



S. G. Ritchie, Halifax

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

ALBERTA



John Clay, Calgary

NEW BRUNSWICK



Harry H. Peters, Saint John

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



J. S. Bricker, Vancouver

The Enemy of the Good

Walter B. Pitkin, author of "Life Begins at 40" and professor of journalism at Columbia University, in writing in the Reader's Digest on the subject, "The Most Unforgettable Character I've Met", describes a Detroit school teacher of the '90's as saying: "I am the Enemy of the Good. I am not joking. I do not like good students. I like only the best. I do not like a good translation. I like only the right translation. You either know something, or you don't know it. You either can do a thing, or you can't."

Pitkin goes on to say that everyone, at least once, ought to fall under the spell of a fanatical perfectionist and that only then can the common man come to realize his own astounding possibilities, that to understand that it is possible to hate half-knowledge, half-skills, half-hearted ideals, sets fire to something inside you. He further says, "You can't make people perfect, or the world perfect, they object, but men, by trying to perfect themselves, their businesses and their government, may make all these ten times better than they are now."

As we commence another year of practice, could we not imbibe, as a profession, some of the ideals suggested in the above quotation? There are

some who feel, and I believe wrongly, that they have to cut fees in order to meet competition, and this leads to indifferent work. There are some who work at such low fees that they have to work early and late in order to survive, with the result that there is no time for study, for self-analysis or for working out plans for general advancement. Some of the older men have seen their practices gradually fall away and have given as an excuse every reason except the right one.

There are many who have not mastered the art of dental practice, and may see leaner days in the future unless certain adjustments are made, even though at the present time they may be enjoying the satisfaction of a crowded appointment book. It is not enough to have unusual technical skill. The dentist must know how to apply his scientific knowledge if he is to succeed. He must be endowed with a manner that inspires confidence; if not, he must study to acquire it. He must be dignified. He must study psychology in order to know how to deal with various types of patients, every one being a problem unto himself. The dentist's knowledge of human nature should be profound. He must recognize the intellectual, the nervous, the fearful, the shy, the erratic and the ignorant type of individual and be able to meet these patients with methods suitable to each class.

The modern dentist should master the English language, and also English composition, so that he can meet his patients properly and write to them correctly. President Elliot, of Harvard University, once said, "I recognize but one acquisition as an essential part of the education of a lady and a gentleman — namely, an accurate and refined use of the mother tongue." Worth-while patients expect this characteristic in their dentist and physician. We must be well-equipped dentists, not merely technicians.

Some time ago the writer wrote to Dr. B. D. Myers, Dean of the Indiana University School of Medicine, inquiring as to what emphasis was placed on the mastery of the English language in this institution. The following reply was received: "Six semester hours of work in English Composition are required of all premedical students unless they are excused from part of these hours on the ground of successfully passing an exemption examination. Then in our third premedical year, which is the junior year of our School of Liberal Arts, an English Proficiency test is required, the purpose of which is to keep the subject matter of English Composition before the student body. Then, among our electives, Public Speaking is a recommended elective. Students who come to us from other schools are required to pass a Proficiency Test in English Composition given by our Department of English even though the student may be the holder of a Baccalaureate degree. We believe that requiring a Junior Proficiency Test of all of those accepted for admission to Indiana University School of Medicine will place such emphasis upon the English requirement that in a short time our students will come to us much more proficient in their ability to write clear and concise English." The emphasis placed on the knowledge of English Composition in this and other pro-

fessional schools is most praiseworthy and should be emulated by the dental profession, to an ever increasing degree.

There is undoubtedly more to the practice of dentistry than technical skill but technical ability is an essential and in this respect we would be virtually "the Enemy of the Good," should we be satisfied with anything short of perfection.

Organized dentistry could do much to stimulate a finer type of practice. Men should be appointed to devote their whole time to working on these problems of practice. Surveys could be made. Experimental tests could be carried out in certain districts. A consultation service could be maintained. An intensified study could be made of our various problems. All would benefit and the public, most of all. It should be pointed out, however, that all this cannot be accomplished on the basis of a few cents a month membership fee.

The best-loved man in New England, Phillips Brooks, said, "The ideal life, the life full of completion, haunts us all. We feel that thing we ought to be beating beneath the thing we are." This being true, let us make a greater effort during 1941 to reach the ideal life in so far as the practice of our profession is concerned.

God calls a man to be upright and pure and generous, but he also calls him to be intelligent and skilful and strong and brave. The world wants a man who is educated all over; whose nerves are brought to their acutest sensibility; whose brain is cultured, keen, incisive, penetrating, broad, liberal, deep; whose hands are deft; whose eyes are alert, sensitive, microscopic; whose heart is tender, broad, magnanimous, true. Every profession and every occupation has a standing advertisement all over the world: Wanted—A MAN.

Bombed Surgeries

In the November 1 issue of the British Dental Journal the editor states that amongst the many who have suffered from the indiscriminate bombing of non-military objectives by the enemy there are a number of dentists. Some have lost their homes; some, their surgeries; while others still more unfortunate have been deprived, at one stroke, not only of their homes but also of the means by which they live, their surgeries and equipment.

All possible aid is being rendered to these men by their more fortunate confrères. Spare surgeries and equipment are being placed at their disposal. Announcement of new addresses are being officially made in the Press. A Central Bureau has been set up at the B.D.A. Headquarters to keep in touch with every part of the country in order to co-ordinate the efforts of the members.

Perhaps the greatest problem is the one of preserving the goodwill of the

practices which have been shattered as the result of the war but even this problem is being faced with the calm efficiency which is so characteristic of our British brothers when under fire.

It is difficult for us here in Canada to appreciate what it means to a British dentist to suddenly lose the goodwill of his practice due to physical disaster since the goodwill of a professional practice is worth very little anywhere on this continent. However, we do realize that the goodwill of a practice in Britain is a most valuable asset and that the conditions which are responsible for bringing about this goodwill are indeed most praiseworthy and might be emulated by our Canadian people.

Our hearts go out in deepest sympathy to the dentists of Britain who have lost all in the cause of civil and religious freedom.

BOOK REVIEW

"Control of Pain in Dental Practice,"
edited under the direction of J. L. T. Appleton, D.D.S., 195 pages, 16 illustrations. Published by J. B. Lippincott Company, Montreal. Price \$4.00.

This text-book is the result of a symposium conducted by the Academy of Stomatology, Philadelphia. It is composed of eight chapters, each written by a prominent authority on a particular phase of the subject.

The first chapter is devoted to the gross anatomy of the innervation of the teeth, jaws, face and related parts and is contributed by Oscar V. Batson, M.A., M.D. The second chapter deals with the innervation of dentine from a histological viewpoint and is written by H. R. Churchill, D.D.S., Dr. Med. Dent. The physiology of pain is discussed in chapter 3, by G. P. McCouch, A.B., M.D., and in chapter 4, Francis J. Braceland, M.D., considers the psychologic and psychiatric aspects of pain and pain control. The pharmacology of drugs used in control of pain is the subject of the fifth chapter, which is written by Carl F. Schmidt, A.B., M.D., Hermann Prinz, A.M., D.D.S., M.D., Sc.D., D.M.D., contributes chapter 6, on the early history of pain control in dentistry. Chapters 7 and 8 deal with physical factors in the production and control of dental pain and drugs used in pain control in dentistry and their application, and are written by A. B. Gabel, M.A., D.D.S., and James Aiguier, Ph.G., D.D.S., F.A.C.D., re-

spectively. The different contributors, as well as the Editor, are members of the staff of the University of Pennsylvania.

The reviewer was most favourably impressed with this book. In the preface, the Editor states that it was written for the general practitioner of dentistry. It is readable, concise and does not discuss the subject at great length, but rather deals with it from a practical standpoint. Some years ago, the reviewer was a member of a group which studied this subject with assistance from the staff of the Medical School of the University of Western Ontario and at that time was impressed with the difficulty experienced in obtaining accurate information. In different cases, many authorities had to be consulted and then nothing definite could be arrived at, due to many differences of opinion. Possibly for this reason the book under discussion has particular appeal.

The profession of dentistry has taken no small part and has many many contributions in the control and relief of pain and for obvious reasons is particularly interested in this subject. This text-book is recommended as a valuable addition to the library of every dentist.

This is the first venture of the J. B. Lippincott Company in the field of dental text-books and they are to be congratulated on their initial effort. The type used particularly appealed to the reviewer.—*Stephen A. Moore.*

CORRESPONDENCE

To Mr. A. W. House,

Consolidated Press, Toronto, Ontario.

Many thanks for yours of September 16, which apart from sending us a routine advertisement proof finds time to send us a cheery message of encouragement.

We certainly have our trials at present, but you will know this from official sources, and from the regular correspondents. It is no part of our present duty or desire to add to that story, for it would be long in the telling and, as happens with so many pictures, it is the details which are important.

We will only say that work goes on and that the general morale of staffs and the ordinary public generally is excellent, and that our one idea is to give the fullest possible meaning to your request to "keep it up."

We know that you are with us. It has already been the writer's privilege to make personal contact with Colonel Trelford, Major Hamilton, Major Baird, Captain Cribb, Captain Conington and Captain Franklin of your Army Dental Service, and beyond that we see your rank and file of the ordinary Army Units around our home areas from time to time. That these fellows are here in their hundreds is all the proof we need that you are certainly very much with us, and the very fact that they have come thousands of miles voluntarily to our side, along with others from even more distant parts, seems in itself to express the whole spirit of the present conflict.

J. C. YEOMAN, *Editor,*

Dental Magazine and Oral Topics

DENTAL CORPS NEWS

No. 16 Company, C.D.C.

No. 1 Training Command, R.C.A.F., Headquarters, Toronto.

This branch of the Canadian Dental Corps is under command of Major E. M. Wansbrough with Captain A. E. Stewart as Adjutant and Lieut. L. S. Williamson as Quartermaster. Dental clinics are operated as follows: R.C.A.F. Station, Trenton; No. 1 I.T.S., Toronto; No. 1 Manning Depot, Toronto; R.C.A.F. Station, Malton; Technical Training School, St. Thomas; No. 1 B&S School, Jarvis; R.C.A.F. Station, Camp Borden; No. 31 S.F.T.S., Kingston; No. 5 S.F.T.S., Brantford; No. 6 Service Flying Training School, Dunnville; No. 4 Bombing and Gunnery School, Fingal; No. 1A Manning Depot, Picton.

The following is the nominal roll of dental officers attached to these various clinics: A/Major E. M. Wansbrough, M.M., Captains H. N. Beach, R. F. Butler, R. R. Butler, C. R. Collard, R. A. Gilbert, L. H. Holmes, E. M. Honey, H. S. Lankin, A. C. Leman, C. F. Lewis, H. A. McIntyre, C. G. Stewart, E. A. Stewart, Adjutant; E. F. Stewart; and Lieutenants C. I. Coburn, G. L. Finkbeiner, J. M. Gabriel, A. Gardiner, J. C. Guthrie, A. W. Irwin, J. H. Johnston, B. R. Jones, J. A.

MacGowan, F. W. McDowell, J. G. MacKenzie, H. R. F. Richardson, L. A. Stirling and L. S. Williamson, Q.M.

Women's Auxiliary of the C.D.C., M.D. No. 4, Headquarters, Montreal

The Montreal Women's Auxiliary of the Canadian Dental Corps held a silver tea on November 15 at the home of Mrs. H. V. Driver, which proved very successful. During the course of the afternoon a sale of home-made jams, cakes and bread was in progress. In addition, there was a drawing for a \$20.00 war savings certificate. Dr. Harry Thomson, Secretary of the Canadian Dental Hygiene Council, was the lucky winner of the certificate.

Ladies Auxiliary of the C.D.C., M.D. No. 10, Headquarters, Winnipeg

A send-off for twenty members of No. 10 Company on one day was quite an event and was the occasion for the gathering of quite a number of relatives and friends at the station. A day or two previous to their departure, the Ladies Auxiliary presented every member with a parcel containing a sweater, socks, candy and cigarettes. Parcels to members overseas contained the above together with

Christmas cake, shortbread, sardines, coffee (two kinds), oxo, life savers, gum and chocolate bars. The work of preparing and packing these parcels reflected great credit on the members of the Auxiliary who are supporting the Dental Corps so wonderfully.

After the above parcels had been disposed of forty-five of other ranks were each presented with knitted sweaters and socks, which the ladies made during the summer.

Season's Greetings from Overseas

Season's greetings and best wishes for Christmas and the New Year to the Editor and Staff of the Journal of the Canadian Dental Association, were received from Lt.-Col. Trelford, A.D.D.S., on behalf of the Officers and other Ranks of the Canadian Dental Corps serving overseas. This message was very much appreciated.

NEWS FROM THE PROVINCES

NOVA SCOTIA:

Halifax Dental Society

A paper on Oral Surgery was given by Dr. A. A. Dunlop, at the regular monthly meeting of the Halifax Dental Society, which was held at the Nova Scotian Hotel, November 13. The address was followed by a discussion. The Society had as its guests, the dental officers on active service and the final year students in dentistry at Dalhousie University. Dr. W. C. Oxner presided.—*Halifax Chronicle*.

BRITISH COLUMBIA:

Vancouver Dental Society

Dental Economics was the subject discussed at the monthly meeting of the Vancouver Dental Society. Dr. William Miller, a clever, able and witty speaker, received an exceptionally good hearing, his theories and recommendations being practical and sound. He discussed the Attributes of a Dentist; the Achieving of Balance by Developing Mechanical and Aesthetic Abilities; Public Relations; Health; Contracts and Collections; Classification of Patients in Relation to Fees; Psychology and the Dental Assistant.

Mr. E. Rogers followed Dr. Miller, giving his experiences based on years of contact with dentists.

Objectionable Amendment Defeated

The most important news from British Columbia was the defeat of an act to amend Section 63 of the Dentistry Act. This Section deals with persons deemed to be dentists for

the purpose of the Act. A group of "Lab" men who have been causing some trouble to the Council endeavoured to have a section of the Act removed; namely, "or repairs therefor." Had this been passed by the legislature the laboratories would have been able to make repairs directly for the public, as well as advertising the same. It would have been, also, the thin edge of the wedge in so far as making dentures illegally is concerned. The ethical laboratories co-operated with the College of Dental Surgeons in lobbying to defeat it.

ALBERTA:

Calgary Dental Society

Dr. C. D. Husband, of Red Deer, was the guest speaker at the Calgary Dental Society meeting on November 18 at the Renfrew Club.

For a long time Dr. Husband has been carrying on intensive studies on the composition of local anaesthetic solutions and their effects in practice. His address to the Society was a complete and interesting report of his findings during the last year.

The first point made by Dr. Husband was the advantage of using a local anaesthetic solution with a ph. at least as high as that of the human blood. Test of stock ampules were made at this point showing varying and marked degrees of low levels of the ph. of the solutions contained. The contention was made that the alkaline resources in the tissues injected were depleted to bring the solution to an alkaline level before the procaine could produce anaesthesia.

A simple method of producing a sterile

solution with a ph. of approximately 7.4 to 7.8 was demonstrated by Dr. Husband. It is his contention that such a solution produces a much more rapid anaesthesia with less injury to the injected tissues, and that a greater intensity is produced with the same amount of anaesthetic used.

For some years past the Calgary Dental Society has provided a scholarship of \$50.00 for the Dental Department of the University of Alberta. This scholarship has been awarded at the discretion of the staff of the Department and for last year it has recently been paid to Dr. John Goodison Walker.

At its recent meeting, the Society decided to discontinue these scholarships and instead to make additions to the University Library to the extent of \$50.00 a year.

SASKATCHEWAN:

College of Dental Surgeons

The annual meeting of the Council of the College of Dental Surgeons of Saskatchewan was held in Regina late in October. The election of officers for the year resulted in the selection of Dr. E. W. Mounteer, Regina, as President, and Dr. W. Fraser Smith, Regina, as Vice-president. Dr. L. J. D. Fasken, Regina, is the permanent Secretary-treasurer and Registrar. The other members of the Council are Dr. J. A. Brass, Yorkton; Dr. W. W. Irwin, Moose Jaw; and Dr. P. W. Winthrope, Saskatoon.

Saskatchewan Dental Association

The executive of the Saskatchewan Dental Association, the voluntary dental body in the Province, met in Regina in November and discussed important business.

It was felt that increased pressure on the various Governments for extension of public health services, has made an extensive study of state and municipal dentistry imperative. This study has been carried on by the Committee on Public Dental Health and by the executive as a whole, though no report is as yet available.

One of the objectives of the Association is the building up of a stronger link between

the provincial organization and the Canadian Dental Association. It was considered that the smaller body with its more direct connection with the individual members could be of inestimable assistance in building a virile national organization, which is so much needed to give dental leadership in Canada.

Dues to C.D.A.

At the Annual Meeting of the Council of the Saskatchewan College of Dental Surgeons a resolution was passed agreeing to raise the dues to the Canadian Dental Association to \$4.00 per member, per year, as soon as all the other provinces agreed to do likewise.

MANITOBA:

Manitoba Dental Association

The Dental Act of Manitoba provides for a Board of Directors, six in number, three of whom are elected annually for a two year term. Nominations take place the last ten days of November and the first ten days of December. As there were only three members nominated this year, Dr. Paul Cleave of Neepawa, and Drs. D. G. Leckie and J. F. Morrison, of Winnipeg, these members become automatically elected by acclamation. Dr. Cleave replaces Dr. N. S. Bailey, who is now in command of the dental service for No. 4 Training Command, R.C.A.F. with headquarters at Regina.

Dental Nurses and Assistants

The annual Christmas dinner meeting of the Winnipeg Dental Nurses and Assistants Association was held on Dec. 2, in the oak room of the St. Regis Hotel.

At the conclusion of the business meeting, the members participated in a social evening under the convenership of Miss Evelyn Brethour.

An enjoyable program was presented which included solos by Miss Marian Duggan accompanied by Miss E. Sickerbale, piano selections by Miss Aileen Warren and a short skit.

Members brought Christmas gifts which are to be presented to the men of the South Saskatchewan Regiment.

A. Scott, Ed. Sec.

ONTARIO:

New Board of R.C.D.S.

The result of the biennial election of the Board of Directors of the Royal College of Dental Surgeons of Ontario was as follows:—

District No. 1—S. W. Bradley, M.D.S.,
Ottawa, by acclamation.

District No. 2—S. J. Phillips, D.D.S.,
Oshawa, by election.

District No. 3—F. A. Blatchford, D.D.S.,
Fort William, by acclamation.

District No. 4—Harvey W. Reid, D.D.S.,
Toronto, by acclamation.

District No. 5—G. H. Campbell, D.D.S.,
Orangeville, by acclamation.

District No. 6—J. F. Giffen, D.D.S., Lon-
don, by acclamation.

District No. 7—J. E. Amos, D.D.S., Brant-
ford, by acclamation.

District No. 8—H. L. Field, D.D.S., Ham-
ilton, by acclamation.

A Faculty member will be elected to the Board by the Faculty Council at the January meeting.

Academy of Dentistry, Toronto

The Annual Winter Clinic program was presented in three sessions on December 4. The committee in charge—Dr. Gordon Johnston, Dr. Bob Wallace, Dr. Wendell Holmes and Dr. S. A. MacGregor—is deserving of high praise for the arrangements and for offering a day of post-graduate studies of such high calibre. This annual feature of the Academy has been attracting an increasing attendance year by year. This year guests were present from Hamilton, Oshawa, Owen Sound and other Ontario points.

The following members of the Academy provided the program: Drs. R. S. Woollatt, R. G. Ellis, George A. Morgan, C. H. M. Williams, A. J. McDonagh, Ross Thomas, C. Alvin Snell, Murray Robb, P. Gordon Anderson, Charles McLean, Vernon Fisk, S. S. Crouch, W. B. Amy, Harold Box and J. H. Johnson.

During the evening table demonstrations were given by a number of dentists as well as by dental nurses and dental assistants. The young ladies went to considerable trouble with their presentations and their efforts seemed

to be greatly appreciated, judging by the interest shown. The dental dealers displayed some of the newer products and equipment available to the profession, which is always a real service in keeping the profession informed as to what is available.

The luncheon speaker of the day was Mr. B. A. Trestrail and the dinner speaker was Dr. Robert McClure, Director of Chinese Red Cross.

Peterboro Dental Appointment

On November 26 the Board of Education of Peterboro appointed Dr. J. S. Graham to a full-time post commencing January 2, 1940. His salary was set at \$3,000 with the dental office being open five days a week and Saturday morning and during the Christmas and Easter vacations.—*Peterboro Examiner*.

**Dental Nurses Alumnae Association
of Canada**

One hundred members and friends attended the Canadian Dental Nurses Alumnae Association formal dance on November 28 in the Oak Room of the King Edward Hotel, Toronto. The proceeds will be used to provide dental treatment for needy boys and girls of High School age.

On December 10 the Alumnae entertained the dental nurses in training at their annual Christmas party held at the Women's Union, Toronto.

Miss A. Cribbs, social convener arranged a most enjoyable evening of games, contests and carol singing. A short business meeting was held with Miss Ruth Grimmon, President, in the chair.

Carrying out an annual custom, the Alumnae donated a number of toys and dolls to the Children's Aid Society for their Christmas boxes.—*Helen McKinlay*.

Toronto Chapter

The December meeting of the Toronto Dental Nurses and Assistants took place at the Royal York Hotel on Dec. 2 with Ilean Checkley presiding.

Arrangements were made to care for a family at Christmas this year.

The members stood for a silent tribute in memory of our beloved Honorary Member, Juliette Southard, whose sudden passing was reported a few days before. Mrs. Southard died suddenly at the Florida State Annual Banquet in St. Petersburg on Nov. 12. We will feel her loss very keenly.

Dr. S. W. Leslie gave a very interesting address on the different modes of life and the glands that govern our thoughts and actions.—*Catharine Simpson, Cor. Secty.*

Niagara Chapter

The Niagara District Dental Nurses and Assistants held their monthly meeting on Dec. 2 at Russnell's, Niagara Falls. The President, Mary French presided at the business session, when letters of congratulation on the forming of a new chapter were received from Kitchener and Sudbury. An amount of \$3.40 was collected for the War Fund.

The speaker of the evening, Dr. D. Johnstone, gave a very interesting travelogue on his tour of Europe, while attending the Empire Convention in 1936.—*Gertrude Doyle, Sec.-Treas.*

Kitchener Chapter

The members of the Kitchener District Association met for dinner at 6 p.m. on Dec. 3 at the Forest Hill Gardens.

Plans were made for our second Rummage Sale on Dec. 6. Following the business session Edith Inkster, the President, introduced the speaker,—Dean A. D. A. Mason of the Faculty of Dentistry, Toronto, who spoke on "The Dental Care of the Quints." This proved quite interesting to all present.—*Ruth Clarke, Secty.*

Windsor Chapter

The December meeting of the Essex-Kent County Dental Assistants was held on Dec. 2 in the Canada Bldg. with Dorothy Scott, President, in the chair.

Favourable reports on the sale of the raffle tickets were presented and the War Fund was said to be progressing nicely. Plans for our Christmas party were completed which will be held on Dec. 20 at Janet Hamel's home, when the ticket draw will take place.—*Winnifred Grier, Cor. Secty.*

EMPIRE NEWS

GREAT BRITAIN:

Guy's Hospital

There has been much activity in and around Guy's during the last fortnight; as a result of London's concentrated defences, enemy raiders have been forced to carry out their bombing from great heights, a fact which not only makes military objectives relatively secure, but also exposes civilian population and buildings to extraordinary risks.

The Guy's sector, because of its geographical position, has surely done good service to the country by reason of its treatment of casualties no matter what their number, by reason of its treatment of civilian sick, and by reason of its continued education of new medical doctors. We can now face even more arduous tasks, if need be, with a good conscience.

Slowly but surely our Park is commencing to assume a more normal aspect and to resemble less and less the demolition dump of

the past few weeks. Very soon, the familiar horse and cart will have finished the Herculean labour of removing the rubble; already huge baulks of timber have appeared, as if from nowhere, and seem to presage the rapid reconstruction of our staircase. The aerial attack has been generally less severe of late, but sporadically it has been intense; on occasions, our facilities for the reception and treatment of casualties has been taxed to capacity.—*Excerpt from Guy's Hospital Gazette, Nov. 2, 1940.*

The future of the training of medical students these days must of necessity be a precarious one. With most of the teaching hospitals organized on a sector basis to deal with casualties in large quantities, it is necessary to scatter their personnel widely; in addition, many of the staff have joined the Services. As a result, the old order of things has been entirely upset; medical and surgical firms no

longer exist; adequate numbers of teaching cases are rarely available in one place; and registrars after sleepless nights spent with casualties, rarely feel fit for rounds on the following mornings. Taken all in all, therefore, the student attempting to qualify under present circumstances must anticipate extraordinary hardships, quite apart from the distraction of personal sacrifices.

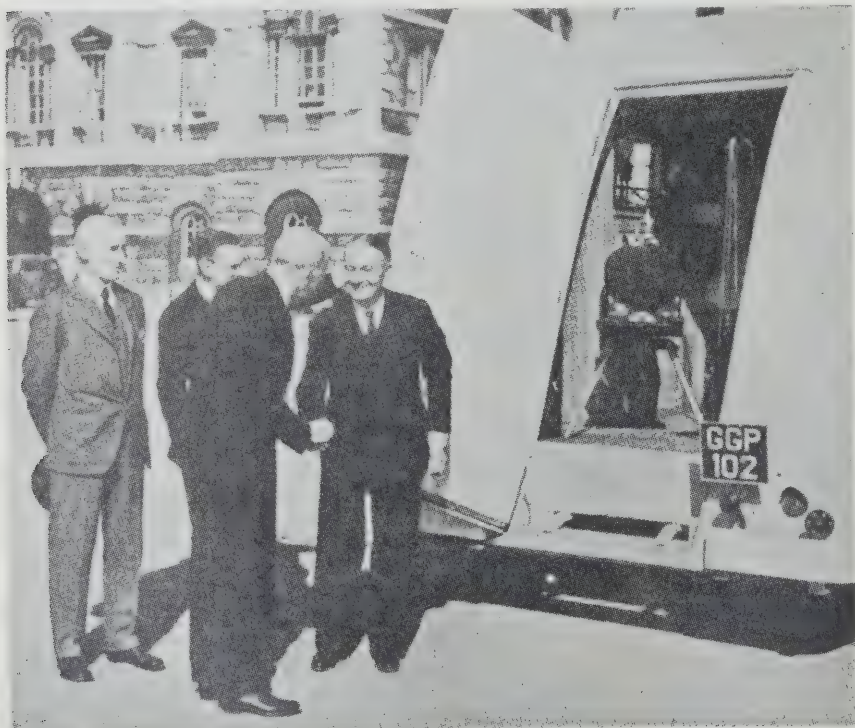
Our Medical School has attempted to balance all these difficulties by organizing the students into groups which move about the sector and systematically get "signed up" for the appointments in their curriculum. Apart from the disadvantage of being the most dangerous from the point of view of bombing, Guy's itself is still the most active teaching centre.—*Guy's Hospital Gazette*, Nov. 16, 1940.

American Dentists Give Britain a Dental Ambulance

A dental ambulance, the gift of dentists in all parts of America, was formally presented to the Ministry of Health on September 4 at a ceremony on the Horse Guards Parade by Dr. C. W. Roberts, President of the American Dental Society of London.

The gift which Dr. Roberts said was proffered as a symbol of the willingness of all American citizens to hold out a helping hand to the British people, was described by Sir Harold Gillies, who with Mr. Kelsey Fry, accepted the gift as representatives of the Ministry of Health, as "a superb gesture of the American dental profession."

The ambulance is equipped as an emergency operating room for the treatment of injuries to the face and jaw inflicted on civilians in



The scene on the Horse Guards Parade after the dental ambulance, the gift of dentists in America, had been formally presented to the Ministry of Health. Sir Harold Gillies is seen thanking Dr. C. W. Roberts, President of the American Dental Society of London, who made the presentation, and on the left are Sir Frank Pearce and Mr. Kelsey Fry.

air raids, and is manned by a general surgeon, a dental surgeon, a dental mechanic and an anaesthetist. It thus provides the Emergency Hospital Scheme of the Ministry of Health with the means of transporting a specialized team to a bombed area so that casualties can be treated on the spot.

Sir Harold Gillies, consultant adviser in maxillo-facial surgery to the Ministry of Health Emergency Hospital Scheme, in accepting the ambulance on behalf of the Ministry, said that it was a most valuable addition to the equipment and efficiency of the maxillo-facial units. Their American colleagues, with their quick minds, efficient organization, and ready purses, had organized a fund in such a way that not only one ambulance but part of another had already been subscribed.

Sir Frank Pearce expressed the thanks and appreciation of the British Dental Association.—*Condensed from Dental Magazine and Oral Topics, Oct., 1940.*

The Royal Dental Hospital—Air Raid Damage

The Royal Dental Hospital was one of the buildings in Leicester Square which suffered in a recent raid. Although the damage was considerable repairs have been made and the Board of Management have decided that the work of the hospital shall continue to be carried on in Leicester Square. All departments of the hospital are open.—*Br. D. Journal, Nov. 15, 1940.*

AUSTRALIA:

Rationing of Paper

It was announced by the Editor of the Dental Journal of Australia, Dr. P. A. Ash, that he had been informed by the Comptroller-General of Customs that it would be necessary to make a further reduction in the amount of

paper used in the publication of the journal.—*D. Journal of Australia, Nov., 1940.*

NEW ZEALAND:

Income Tax Returns

The New Zealand Dental Association has been notified by the Land and Income Tax Department that some alterations have been made in the basis of depreciation allowance for various classes of equipment. Those affecting principally dental practitioners are as follows:—

General Equipment	7½% diminishing value
X-ray Equipment	15% diminishing value
Motor Vehicles	20% diminishing value

In accordance with the request of the Commissioner of Taxes these facts are published for the information of members.—*N. Z. Dental Jour., Sept., 1940.*

British Children

The Executive Council of the Association has offered, on behalf of our members, to take an interest in, or perhaps provide homes for dentists' children who may be sent from Great Britain to New Zealand, either privately or through the Government scheme. As a preliminary, therefore, any member interested is asked to communicate with the Hon. Secretary of the Association. The Executive Council also has offered to see that all the British children who come to this country and whose dental requirements cannot be attended to in clinics, etc., have the opportunity of receiving free treatment, and it feels sure that this can be satisfactorily arranged when the necessity arises.

On behalf of the Executive Council,

HERBERT S. WILKINSON,

Hon. Secretary.

—*N. Z. Dental Jour., Sept., 1940.*

Whenever you are dealing with a person, think of the background of that person. By his background I mean his home, his family, relatives and friends, and his past successes or failures.

Whenever I meet a man for the first time, I ask him questions. I try to find out his background . . . I find that the longer I live, the more I am interested in people's backgrounds—in the memories and feelings that are helping or hindering them.

To really get in touch with any man, you must find out what is his background.—Herbert N. Casson in the "Efficiency Magazine."

GENERAL NEWS



—Courtesy, Hudson's Bay Company.

Dr. Charles H. M. Williams, of Toronto, who accompanied the Nascope on its Arctic voyage in 1939, is shown in the above picture examining the mouth of an Eskimo patient.

Committee to Defend America by Aiding the Allies

The above U.S.A. Committee which is of national scope has been very active in trying to unify public opinion on National Defence policies and particularly, in educating the people to the point where they will realize that offering material help to Britain will permit the U.S.A. sufficient time to build up its own defence.

The citizens of this great nation are fast beginning to realize that if Britain were defeated they, too, would soon become the helpless victims of this great enslaver of nations.

The Sub-committee for Medicine and Dentistry has mailed a splendid letter to all dentists and physicians in the United States pointing out the dangers of the present situation and urging them to make their influence count in keeping the war out of America by giving all possible aid to Britain.

Present Status of the Hartman Solution

by JAMES F. HENEGAN, D.D.S.

(Condensed from the New York Journal of Dentistry, per Dentistry a Digest of Practice.)

A Committee of 28, appointed by the First District Dental Society, who conducted clinical tests and issued a cautionary statement in regard to Hartman's solution were polled recently by the Dental Information Bureau. The bureau is official spokesman for the First and Second District Dental Societies of the States of New York, the New York Academy of Dentistry, the Greater New York Dental Meeting Committee and the New Jersey State Dental Society. *Result:* 25 men of the 28 responded and 18 reported that they no longer used Hartman's solution; 2 reported using it; and 5 explained that it was useful occasionally. Twenty-three men reported why they either no longer used the preparation or merely used it occasionally, with the majority report-

ing it "ineffective," while others said that it was "unstable, unsatisfactory or unsuccessful." Although several men reported that this type of preparation is of value in treating children, the head of a large clinic which treats only children reported that the clinic no longer uses the preparation.

The Fortnightly Review of the Chicago Dental Society

Commencing January 1 the Bulletin of the Chicago Dental Society was replaced by a new publication known as the Fortnightly Review of the Chicago Dental Society. The new publication will have greater scope. It has a larger number of pages, thus affording more space and it has been restyled with a cover in colour.—*Bul. of Chi. D. Soc.*

Automobile and Medical Expenditures in Family Budgets

Recent studies by the United States Bureau of Labour Statistics indicate that the much exploited difficulties in the payment for medical care are due more to the increase of expenditures for other items in the family budget than for medical care itself. The Bureau of Labour Statistics has recently set up a new basis for the index figures on costs and standards of living. This required a detailed analysis of all recent budget studies. This analysis broke down the various items in the budget into such classes as food, clothing, fuel, house furnishings and miscellaneous. In this "miscellaneous" item the greatest change in expenditures was found. The periods compared are 1917-1919 with 1934-1939. Expenditures for food and clothing made up a smaller percentage of the family budget in the later period, while the expenditure under "miscellaneous" increased from 17 per cent of the total budget in 1917-1919 to 26.8 per cent in 1924-1936. The new index will be based on 1935-1939 and, when allowances are made for changes in the value of money and the exclusion of certain items which were previously counted as "savings," the percentage of ex-

penditures for "miscellaneous" in the average budget is raised from 23.7 for 1923-1925 to 26.9 in 1935-1939. When this "miscellaneous" item is analyzed, expenditures for automobiles are found to have been practically negligible from 1917 to 1919, but now "in combination automobile purchases and operation constitute almost one fifth of the new miscellaneous index." At the same time the "weight for medical care is less by one half." During the last twenty years the purchase and care of automobiles seem to have had greater appeal than the desire for additional medical service. No doubt improved health has also lessened somewhat the need for more medical service.—*Jrl. of the A.M.A.: 10-26-40.—A.D.A. Release.*

Synthetic Rubber

An article in a recent number of The Engineer reviews the various application of "Neoprene," a synthetic rubber now manufactured by the Imperial Chemical Industries, Ltd. Although the cost of this product is higher than that of natural rubber it has greater resistance to higher temperatures, acids and oils.

Its resistance to oil is especially valuable, and makes possible its use where natural rubber would perish in a very short time.—*Dental Record, Nov., 1940.*

Michigan Dental Ad. Law is Upheld

Michigan voters, in a state referendum upheld an act of the 1939 legislature abolishing advertising by dentists. The act, which becomes effective immediately, provides, in addition to higher standards for dentists, that no dentist advertise prices. The Michigan Press Association unsuccessfully combated the measure, supporting a group of advertising dentists who forced a state-wide referendum. The association had contended restriction of advertising would threaten free competition and even freedom of the press. Under the new act, no dentist may own or manage more than one office and operate them under his own name with employed operators. The final vote was three

to two in favour of the act as passed by the legislature.—*Editor and Publisher*; 11-9-40; *A.D.A. Release*.

Dental Picketing Barred

Supreme Court Justice Peter Schmuck has granted a temporary injunction restraining Chapter 101 of the Dental Technicians Equity, a C.I.O. affiliate, from picketing the dental office of Dr. Philip Back at 576 Fifth Avenue. The union is conducting a strike against the New Era Laboratory in the Bronx, which makes some of the dental laboratory work for Dr. Back.

The union based its right to picket on an alleged "unity of interest" between the laboratory and the dentist. On this ground courts have permitted unions striking against a manufacturer to picket retail outlets for his product.

"He (the plaintiff) sells no product identifiable by trade name," Justice Schmuck said in overruling this argument. "Rather he has constructed at his personal direction various appliances each individual and distinctive for use by him as an incident to his calling as a professional man in the rendition of skilled service for compensation.—*N. Y. Jour. of D.*—*A.D.A. Release*.

Protection of Practices of Dentists Called to Military Service

(Excerpt from address given by Brigadier General Leigh C. Fairbank, Washington, D.C., at Louisville, Ky.)

While in Southern California a few weeks ago, the question arose: How about the dentists who are called to military service, what happens to their practices? This is a problem. The Government has given thoughtful planning concerning the problems of the man inducted into the military service. The law requires that his employer must guarantee that he will get his job back when he returns. The white collar worker on the other hand is called to the military service and the Government appeals to his employer to make up the difference between his army pay and his usual

income as an employee; this in spite of the fact that business will be called upon to pay excess profit taxes. The professional man, however, takes his stock in trade—his education and his skilled fingers—and enters the Army. The doctor locks up his office, leaves his established practice and fulfils his obligation as a citizen! When he returns, his practice is gone! In Southern California, they sought a sensible and honourable solution to this problem. We like to think of our profession as altruistic in motives and that it possesses deep patriotism and the fine spirit which should be manifest by professional men. It seems to have been expressed in the plan developed in Los Angeles.

When one of their members is called to the military service, he sends a list of his patients to the office of the secretary of his society. Notices are sent to each patient by the secretary, advising him that his dentist, Dr. Smith, has been called to the military service and the local dental society, through the secretary's office, will be glad to assist him when he is in need of dental service. The members who are not called to military service volunteer to assist in the care of those patients of members called to active duty who require dental care. Mrs. Jones, one of Dr. Smith's patients, needs dental services and calls the association's office, advising them of the difficulty. The secretary arranges for an appointment and makes a record of the call. As different patients call, the secretary secures appointments for them by distributing the calls to the various names on the volunteer list. When Dr. Smith returns, upon the completion of his military service, the secretary notifies the patients of his return and sends Dr. Smith a list of all the dental service given his patients during his absence that have been cleared through the office. This is a splendid plan and displays fine professional spirit and the desire to protect the interests of those who are called to military service. I commend this plan to you for your thoughtful consideration.—*From Supplement to Jour. of Tenn. State D. Assoc., Oct., 1940.*

No man ever sank under the burden of today. It is when tomorrow's burden is added to today's that the weight is more than a man can bear.—G. Macdonald.

. . . SECTION FRANÇAISE . . .

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Editorial

Les événements mondiaux qui tous les jours se modifient, ont pris dans les journaux, à la radio et dans les conversations, une telle place, qu'ils ont causé une espèce de sécheresse générale des cerveaux. Il semble même que la joie de vivre va disparaître tant on y met d'artificiel à la stimuler et qu'à force de penser avec restriction on finit par ne plus penser du tout. Une seule image s'agite dans les esprits, une seule conversation anime les réunions, une seule préoccupation intéresse les intelligences; sur la rue, chez les coiffeurs, dans les bureaux d'affaires, partout la même inquiétude: qu'est-ce que sera demain! Inquiétude, angoisse bien légitimes, faciles à expliquer mais. . . oui, mais ne faudrait-il pas essayer de réagir un peu? Demain c'est l'avenir, mais aujourd'hui c'est le présent, le lien nécessaire entre ce passé plein d'erreurs et de misères et cet avenir qu'on voudrait sérieux, travailleur, producteur et surtout tranquille. Or, demain ne sera rien si on laisse mourir le présent et je n'oserais affirmer que depuis quelques temps nous n'avons pas reculé, descendu considérablement. Le temps que nous prendrons à remonter les côtes ou à revenir sur nos pas sera du temps perdu. Si nous occupons des hauteurs d'où nous croyons pouvoir regarder l'avenir, n'allons pas nous laisser glisser; quand demain viendra ne risquerions-nous pas de nous réveiller ébahis, dans un monde nouveau, dont tous les rouages, toutes les idées, toutes les nécessités échapperaient à notre compréhension.

Pour ne parler que de ce qui intéresse particulièrement notre profession, il semble qu'on en soit rendu au désintéressement que fait naître une profonde lassitude. Notre journal souffre terriblement de cet état d'engourdissement général. Il n'a plus pour

vivre que du vieux gagné et encore ses provisions se font-elles très rares. Nous sommes à la ration. Rien ne nous vient de France ou d'ailleurs. Presque toutes les sources de lumière qui pouvaient nous inspirer des idées personnelles, nous mettre sur la trace de recherches utiles, nous sont fermées. Il va falloir vivre par nous-mêmes et progresser seuls . . . Je ne doute pas que nous en soyions capables, pourvu qu'on veuille bien s'en donner la peine. Les intelligences ne manquent pas chez nous et plusieurs confrères seraient capables de travaux personnels si seulement ils voulaient oser.

Le rédacteur, qu'on le comprenne bien, ne peut faire vivre le journal sans collaborateurs. Tomber dans cette erreur serait croire que chaque mois il pourrait en remplir les colonnes de ses écrits. Et même s'il allait être capable d'un pareil tour de force; on aurait tôt fait de réclamer la fondation d'un autre journal qui serait bien celui de la profession. Eh bien! notre profession l'a ce journal, c'est à elle d'y voir. Le rédacteur n'est que votre serviteur et ne demande pas mieux que d'avoir beaucoup d'articles à lire ou à classer. Ce ne sont pas des volumes qu'il vous demande, pas plus que de longs traités sur les infections en général ou sur tout autre sujet qui pourrait se diviser en dix. Ce qu'il demande surtout ce sont de courts articles d'une ou quelques pages dactylographiées. On peut aller jusqu'à dix ou douze, mais pas beaucoup plus. Les différentes Sociétés Dentaires de la province pourraient, si elles voulaient, rendre d'inappréciables services dans ce domaine. Elles n'ont qu'à constituer chez elles un petit organisme chargé de recueillir des travaux, des nouvelles locales, des petites communications, etc. et les adresser chaque mois au rédacteur qui se ferait un plaisir de les publier. Ne serait-ce pas un excellent moyen de se distraire un peu des terribles préoccupations du moment, de rendre service aux siens en se faisant une légitime publicité. J'ajouterai même si on me le permet, c'est un pressant devoir national.

DR A. THIBAUDEAU.

Le prochain congrès

Les confrères n'ont certainement pas oublié qu'aux Trois-Rivières il fut décidé que le prochain congrès aura lieu à Québec. L'enthousiasme avec lequel cette nouvelle fut accueillie témoignait déjà de la satisfaction générale et semblait promettre un nouveau succès.

Il suffit de connaître le président et ses confrères de Québec pour savoir que rien ne sera négligé. Le docteur Hamel, malgré les difficultés actuelles, est allé aux Etats-Unis assister au congrès de New-York dans le but exprès de préparer celui de Québec. Il en est revenu satisfait. Ce qui veut dire que les organisateurs ne manqueront pas de conférenciers ou de matière scientifique. A nous donc de nous préparer à cet événement.

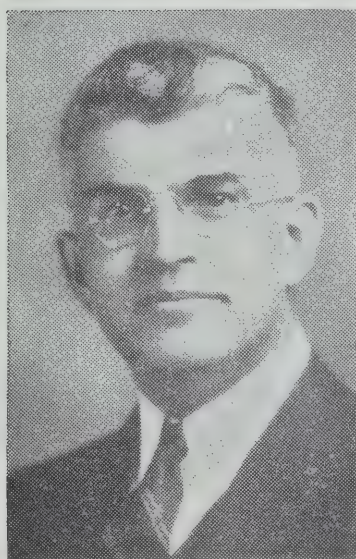
Tous ceux qui désireraient offrir leur collaboration en donnant des cliniques ou démonstrations sur tables, sont priés de s'adresser au président de ce comité, le docteur Herman Le Bon—37, rue de la Couronne.

En dernière page nous publions la liste de tous les comités.

LA REDACTION.

Une technique pour la prise des empreintes du bas*

par ARTHUR A. BLONDIN, D.D.S., Manchester, N.H.
traduit de l'anglais par Gérard de Montigny.



ARTHUR A. BLONDIN, D.D.S.,
Manchester, N.H.

Cher confrère,

Je regrette de ne pouvoir vous présenter cette clinique dans votre langue; je parle quelque peu français, mais ma langue habituelle est l'anglais; c'est donc dans cette langue que je vous parlerai ce soir; je m'en excuse à l'avance.

Je ne suis pas un expert en prothèse; d'autres opérateurs ont fait beaucoup pour l'avancement de la science prothésiste; je ne suis qu'un praticien général d'une petite ville et je vous apporte les résultats de mes observations et de mes expériences. Comme vous, j'ai marché dans l'à peu près, j'ai essayé plusieurs méthodes et j'ai tenté de retenir ce que chacune d'elles avait de bon et de moins bon.

Il y a huit ans, quand j'ai parlé pour la première fois de succion obtenue sur les dentiers inférieurs, on reçut mon assertion avec des sourires de scepticisme; on ne pouvait pas concevoir qu'il était possible de l'obtenir chez tous les patients et on prétendait qu'un dentiste pouvait, par chance seulement, avoir une réelle succion pour les prothèses complètes du bas. Mais depuis après beaucoup de tâtonnement, on en est venu à considérer comme possible une bonne rétention des pièces inférieures pour toute la mâchoire.

Ce soir, la technique que je veux vous présenter n'a rien de compliqué; elle repose sur des principes simples d'anatomie et de mécanique. C'est pourquoi, chacun de vous peut se servir de cette méthode et si elle ne lui plaît pas, il peut tout de même en tirer des suggestions, qui l'aideront à solutionner le problème de la rétention des dentiers inférieurs.

INSTRUMENTATION

Un dentiste qui veut réussir parfaitement son travail de prothèse doit avoir à sa disposition l'instrumentation et le matériel, dont il a besoin. Par exemple, les porte-empreintes sont, à mes yeux, les instruments les plus importants de toute la prothèse. Il nous faut un grand nombre de porte-empreintes pour répondre aux exigences de chaque cas. Dans votre clientèle, vous rencontrez tous les genres de bouches, des bouches où les crêtes sont réduites à leur minimum; des bouches où les crêtes sont très larges et d'un volume considérable; des attachements musculaires qui s'insèrent plus ou moins haut sur les crêtes dentaires, etc. Il vous faut donc avoir un porte-

* Communication et clinique présentée à la Société Dentaire de Montréal, le 20 novembre 1940.

empreinte qui s'adaptera à chaque cas particulier — c'est donc dire qu'un dentiste aura dans son cabinet un nombre presque incalculable de porte-empreintes. Et même avec un grand choix de porte-empreintes, il nous faut souvent tailler nos porte-empreintes pour les adapter aux maxillaires des patients. C'est donc dire qu'il faut presque un porte-empreinte individuel pour chaque cas particulier.

La Blue Island Specialty Company a fabriqué, sur ma suggestion, des porte-empreintes qui conviennent admirablement bien à la technique que nous verrons ensemble tout à l'heure.

Ils portent les numéros 812-816 et 832-836 inclusivement. Les porte-empreintes du bas ont un prolongement lingual, de chaque côté, qui nous permet de porter la cire et le plâtre des deux côtés de la langue, jusqu'au plancher de la bouche et aussi loin que possible distalement à la troisième molaire.

Cependant, tout porte-empreinte qui possède une voûte profonde et des prolongements perpendiculaires, qui s'étendent aussi loin que possible, peut servir pour cette méthode, pourvu qu'on l'ajuste et qu'on le taille pour convenir au cas en présence.

Le matériel, que j'utilise, est une cire d'abeille de bonne qualité, une cire collante et du plâtre de Paris. Quant aux instruments employés pour tailler la cire, ils ont peu d'importance; on peut se servir de grattoirs, de canifs et de n'importe quel instrument tranchant, dont on peut disposer.

Certains, parmi vous, se servent de "Stent" pour prendre leurs empreintes; il n'y a pas d'inconvénient à employer le "Stent" pourvu que vous connaissiez bien les prescriptions, qui règlent son emploi. Je me sers de cire d'abeille, car je trouve qu'elle se manipule plus facilement que le "Stent"; de plus, elle est moins rugueuse pour les tissus de la bouche, quand elle est refroidie; ensuite elle se coupe plus facilement. Mais, comme je vous disais, certains praticiens utilisent le "Stent" et obtiennent des résultats merveilleux.

TECHNIQUE

Porte-empreinte

Après avoir choisi un porte-empreinte de la longueur, de la profondeur et de la largeur voulues, je l'ajuste pour convenir au cas en présence, en le taillant à l'aide d'une paire de ciseaux pour dégager d'une façon générale les saillies osseuses, les attachements musculaires et les bourgeons fibreux, que nous trouvons souvent dans certaines régions de la bouche. Il faut choisir un porte-empreinte qui portera la cire assez loin pour refouler les muscles et qui permettra à la cire de couvrir toute la surface de la crête.

Empreinte en cire

Employez une bonne marque de cire d'abeille pure et amollissez-la dans un bol d'eau chaude à une température d'environ 120° F. La chaleur sèche n'est pas à conseiller, car elle n'amollit pas la masse de cire d'une consistance égale dans tout son volume. Il ne faut pas surchauffer la cire, car elle deviendrait trop molle; elle ne pourrait pas refouler les attachements musculaires et s'étendre sur toute la surface des crêtes.

Dans le porte-empreinte, on dépose ensuite un rouleau de cire d'un diamètre d'environ trois quarts de pouce; on insère ensuite le porte-empreinte rempli de cire sur la partie antérieure de la crête d'abord, et ensuite par un mouvement d'arrière et en bas, on enfonce le porte-empreinte pour refouler les muscles jusqu'à ce que la cire, qui débordait du porte-empreinte, ait pris une forme carrée: signe que les muscles ont été repoussés à leur extrême limite.

Quand notre porte-empreinte a été bien enfoncé, on le maintient en place; en tirant les joues et les lèvres et en demandant au patient de relever les muscles du plancher de la bouche et de la langue, on imprime sur la cire encore molle les attachements de ces

muscles. On refroidit la cire avec de l'eau froide ou glacée et on retire l'empreinte; à ce stage, la cire doit couvrir uniformément toute la surface de l'intérieur du porte-empreinte. Si le porte-empreinte est visible à un endroit, c'est-à-dire si le porte-empreinte n'est pas complètement recouvert par la cire, il faut tailler ce porte-empreinte à cet endroit et reprendre l'empreinte au complet. Répétez cette opération jusqu'à ce que vous obteniez une empreinte de cire parfaite qui portera la substance plastique (plâtre) partout, sans obstruer le travail musculaire. Sur une crête peu élevée, ou presque plate, employez un peu plus de cire sous la langue pour écarter les amas musculaires; autrement ces muscles vous nuiront pour obtenir une empreinte complète de la crête.

Il faut refouler davantage les muscles, dans ces cas, car, contrairement aux cas, où il se trouve des crêtes épaisses et volumineuses, il est plus important d'obtenir une bonne imprégnation de toute la crête dans la cire.

Taillage de l'empreinte en cire

Après avoir réussi son empreinte en cire, la plus importante phase est de bien tailler sa cire; la technique que je vous démontrerai tout à l'heure demande, pour être réussie, qu'on observe bien les points suivants dans le taillage de la cire. Découpez la cire sur toute la surface qui sera couverte par le dentier en laissant un sceau périphérique tout autour de l'empreinte. Avec un canif chauffé ou un grattoir à vulcanite, coupez la cire du point où elle commence à s'arrondir; cette manière de faire maintiendra le sceau autour de l'empreinte. Du côté buccal, diminuez l'épaisseur de la cire jusqu'à ce qu'elle reste d'une épaisseur d'un seizième à un huitième de pouce selon le cas pour que l'empreinte soit plus facile à entrer dans la bouche. Quand l'empreinte remplie de plâtre est placée dans la cavité buccale, le sceau placé à son extrême bord forcera le plâtre à se placer avec une pression égale sur toute la surface qui sera couverte plus tard par le dentier fini et procurera une adaptation parfaite partout.

Points de rétention

S'il y a des points de rétention ou des endroits où le plâtre aura tendance à se briser, quand on enlèvera l'empreinte, coupez-y plus de cire, pour que le plâtre soit plus épais dans ces régions et que, s'il se brise, vous ayez un fragment qui ait plus de consistance et qui soit plus facile à remettre en place.

Plâtre

J'emploie habituellement le plâtre à modèle French avec du sel comme accélérateur. Je mêle le plâtre à l'eau jusqu'à ce qu'il ait la consistance de la crème. (Un mélange trop liquide ne fera pas une pression suffisante sur les tissus et un mélange trop épais ne pourra pas être vibré en le plaçant pour enregistrer tous les détails). Il ne faut pas confondre cette méthode avec une empreinte finie à l'aide d'un légère couche de plâtre liquide. Si on place dans son empreinte de cire un plâtre trop liquide, on ne pourra pas avoir la pression uniforme de toute l'empreinte sur la crête. Une pression uniforme dans l'empreinte de cire est bien essentielle pour obtenir une adaptation parfaite du dentier terminé.

Quand vous placez le porte-empreinte avec la cire et le plâtre dans la bouche, il faut que la langue soit par dessus le porte-empreinte; dites au patient de relâcher la langue. En accomplissant ce que vous lui demandez, le patient vous donnera une chance de refouler ses muscles et d'enfoncer votre empreinte en la vibrant jusqu'à adaptation complète. Si vous poussez trop fort, à ce moment, le patient naturellement voudra résister et ses muscles deviendront tendus et il vous sera impossible de les reculer du chemin. Si, quand vous avez enlevé l'empreinte, la surface entière de la crête n'est

pas enregistrée en plâtre et si la cire apparaît à certains endroits, enlevez tout le plâtre, rognez la cire aux places où le plâtre ne s'est pas rendu et reprenez l'empreinte. Ceci est bien nécessaire pour donner à l'empreinte une pression égale et uniforme partout.

Ajustement du dentier

S'il est nécessaire de retoucher un dentier fait d'une empreinte prise de cette façon, faites le avec soin. Soulagez légèrement l'extrémité du bord qui coupe les tissus et recommandez au patient de porter le dentier deux ou trois jours pour permettre au dentier de se replacer en position après que l'enflure et l'inflammation sont disparues. Dans les cas à crêtes peu élevées, où les muscles sont d'un gros volume, faites le dentier très mince à la surface linguale pour permettre aux muscles de fonctionner librement et si nécessaire, retouchez le dentier, tel que je l'ai décrit tout à l'heure.

Il ne faut jamais meuler un dentier à la surface interne, car la succion repose sur une adaptation parfaite sur tous les points plutôt que sur une pression exagérée à un endroit ou à un autre. Il est à conseiller, de couvrir partout où la chose peut se faire, les deux tiers du triangle rétro-molaire et aussi profondément que possible; l'endroit où il faut arrêter la pièce est juste situé là où l'empreinte de cire commence à tourner. Dans les cas de crêtes profondes, nous devons finir les bords du dentier assez minces pour allouer aux muscles leur liberté de fonction sans qu'il y ait d'interférence. Amincissez aussi les côtés internes du dentier chez ces patients qui ont de gros muscles au plancher de la bouche et chez ceux qui ont des langues épaisses et larges; autrement il y aura interférence musculaire et le dentier manquera d'adaptation.

Insuccès

Les insuccès qu'on éprouve dans les cas de crêtes profondes sont attribuables à un manque d'adaptation. Si la prothèse ne vient pas en contact intime avec tous les tissus de la crête, elle s'enfoncera dans les tissus mobiles en causant des irritations. On s'efforcera alors de diminuer le contact de la pièce en la meulant; le bord interne de la pièce sera sacrifié et on perdra alors une surface nécessaire à la rétention. Les insuccès rencontrés dans les cas où les crêtes sont très basses, proviennent du fait qu'on ne refoule pas suffisamment les attachements musculaires et les muscles qui recouvrent la crête; ainsi on n'obtient pas un contact de la cire avec toute la surface de la crête. On obtient des insuccès dans les cas de ce genre parce que le dentier est trop épais du côté lingual ou qu'on le laisse chevaucher sur les muscles à un point quelconque.

Avant de passer à la partie clinique de mon travail, je voudrais vous entretenir brièvement d'une façon d'augmenter la rétention de nos pièces tant du bas que du haut. Quelques-uns ont dû s'étonner que je ne parle pas d'endiguement postérieur pour les pièces du haut; durant la prise d'empreinte, je néglige à dessein cet endiguement, parce que plus tard dans la confection de mes pièces j'emploie un moyen simple et efficace pour le remplacer.

Sur tous mes modèles, avant d'y presser la vulcanite ou la substance acrylique, je trace à l'aide d'un poinçon ou de tout autre instrument tranchant, une rainure, qui s'étend d'une tubérosité à l'autre en passant transversalement par le centre de la voûte palatine. Cette rainure, je la prolonge de la tubérosité, de chaque côté jusqu'à la région prémolaire.

A la voûte palatine, cette ligne sera doublée; car si, quand le dentier est fini, on se rend compte qu'il se rend trop loin en arrière, (sur une partie du palais mou, par exemple), on peut meuler le dentier, en entamer la première ligne; la seconde ligne restera intacte.

Quand la pièce est terminée, nous aurons donc à la voûte palatine une double ligne surélevée et de chaque côté une ligne simple qui se rendra jusqu'aux régions pré-

molaïres. Si cette surélévation est trop forte et blesse les muqueuses, il sera toujours facile de diminuer l'épaisseur de cette ligne avec un grattoir, une meule ou une lime.

Le conférencier passe ensuite à la démonstration de sa technique, sur deux patients, qui ont été choisis à sa demande: un présentant une crête normale et l'autre ayant une crête de volume bien réduit et de gros attachements musculaires.

Le clinicien réussit deux empreintes parfaites qui sont mises à circuler dans l'assistance qui goûte fort cette clinique.

DISCUSSION

Dr Armand Fortier: "Il me vient un cas à la mémoire, qui m'a procuré beaucoup de difficultés. C'était un cas complet du haut ayant une bosse dure au centre du palais et une surface de tissu fibreux en avant, qui s'étendait de la région canine droite à la région canine gauche sur la crête. Pourriez-vous me dire de quelle manière vous auriez traité ce cas et comment auriez-vous procédé à la fabrication d'un dentier satisfaisant pour le patient et pour vous-même?"

Dr Blondin: Des problèmes tels que ceux-ci peuvent être solutionnés de deux manières; on peut avoir recours à la chirurgie pour enlever ces bosses dures; c'est le moyen le plus simple. Il ne s'agit que de pratiquer une incision longitudinale au centre de cette protubérance, de refouler les tissus et d'enlever cette exostose au moyen de fraises, de gouges, de limes ou de rongeurs. Après avoir aplani cette bosse, on ramène les lambeaux de muqueuse, et on laisse guérir. C'est une opération très simple.

Si le patient refuse l'intervention chirurgicale, on procède de la façon ordinaire en laissant un espace au centre du dentier pour accommoder cette protubérance. Sur notre modèle, on pose une épaisseur de métal, qui diminuera la pression du dentier sur cette bosse, ou encore, il nous est permis de faire un dentier sans voûte palatine, qui contournera cette protubérance; on aura soin cependant de pratiquer une rainure, qui s'étendra sur toute la longueur du bord du dentier pour augmenter la rétention. Quant à l'amas de tissus mous du devant, on se sert de la méthode décrite durant la clinique, c'est-à-dire en prenant l'empreinte en cire d'abeille, en découpant la cire assez profondément dans cette région et en finissant l'empreinte avec un plâtre assez mou qu'on applique en le vibrant; on obtient une empreinte sans pression épousant toutes les sinuosités de cette masse fibreuse.

Dr Laberge: "Quel genre de dents vous servez-vous pour vos dentiers partiels du bas?"

Dr Blondin: Je ne peux indiquer une marque de dent préférable à une autre. Toutes les marques ont leurs qualités et défauts. Le cas particulier qui nous occupe est notre meilleur guide pour le choix des dents. Et même quand nous croyons avoir obtenu le genre de dents qui sied au dentier, il nous faut souvent alors modifier davantage ces dents, en les meulant, en leur donnant une nouvelle surface triturante qui s'accommodera à l'articulation du cas présent.

Dr Gérard de Montigny: "De quelle substance vous servez-vous pour prendre vos empreintes de dentiers partiels?"

Dr Blondin: Certains opérateurs emploient les substances colloïdales; d'autres, le "Stent" etc. Pour ma part, j'emploie le "Solvite". Il ressemble beaucoup au plâtre, se manipule facilement et nous procure des empreintes fidèles. Ce qui est important, c'est de bien connaître sa substance.

Quand je prends une empreinte pour dentier partiel, je me sers d'un grand porte-empreinte, car j'aime à ce que la substance, dont je me sers, soit d'un gros volume; ainsi les morceaux sont gros, plus faciles à briser et à assembler.

Evolution de la dentisterie

par PAUL E. POITRAS, D.D.S.

Une maladie de quelques mois m'a donné la pensée d'essayer d'analyser d'une façon différente le problème de la prothèse dentaire, de sa naissance à aujourd'hui.

La coquetterie, depuis notre mère Eve, a toujours existé. Le désir de plaire a fait imaginer de tout temps, quantité d'artifices, pour suppléer aux charmes dont la nature s'est montrée moins prodigue ou pour en perpétuer la durée quand ils se sont prématurément dissipés. C'est de cette coquetterie que naquit la prothèse dentaire.

Des artisans, dont le sens esthétique souffrait de voir des bouches édentées, mettant à profit leurs connaissances manuelles et artistiques, eurent l'idée de remplacer les dents absentes par des dents artificielles. Un nouvel art était né: La Prothèse dentaire. Ces artisans, passés maîtres dans un art manuel par la perspicacité de leur esprit et de ses ressources, se firent dentistes en spécialisant leur savoir à une idée nouvelle. L'art dentaire, comme tous les métiers, s'enseigna par un apprentissage fait chez un maître. Si, devenait dentiste qui voulait, au moins fallait-il avoir une habileté manuelle et un esprit sagace pour vaincre les difficultés créées par de nouveaux problèmes? Les barbiers, les chirurgiens, sans oublier les charlatans, se réservaient l'avulsion des dents et laissaient la prothèse aux artisans.

Avec les années, la médecine, développée par degré, réalisa d'immenses progrès. Chacun ajoute aux travaux précédents des connaissances nouvelles. C'est ainsi que le passé prépare l'avenir en augmentant l'héritage intellectuel légué par les ancêtres.

Nécessairement le temps vint où des médecins étudièrent les maladies des dents d'un point de vue différent de celui des artisans. Ces médecins, dont la formation scientifique ne pouvait être niée, imposèrent leurs connaissances et montrèrent la dentisterie sous un angle nouveau; ces pionniers l'analysèrent d'une façon nouvelle et firent passer progressivement la prothèse, d'un art manuel à une branche de la science de guérir. Ces innovateurs, réussirent à imposer, bon gré, mal gré, à tous les dentistes ignorants, quelques visions de médecine. Le procédé était neuf, et ne manqua pas d'attirer l'attention des contemporains.

Comme il est reconnu qu'un corps professionnel embrasse une association d'individus ayant reçu une instruction spécialisée dans des écoles supérieures, facultés ou universités, seul le médecin-dentiste avait le droit réel d'être considéré un professionnel: les empiriques, les charlatans, tous des dentistes d'occasion, sans études préalables, sans rudiment de l'art, sans diplôme, sans autre talent qu'une faconde intarissable et une certaine adresse, s'attribuaient ce titre, sans scrupule, comme un compliment mérité qui heureusement ne trompait que les plus ignorants qu'eux.

Cependant quelques-uns, déplorant l'incompétence de nombreux dentistes, se trouvaient fort embarrassés pour aider une génération nouvelle à acquérir une formation dentaire scientifique. Pas d'école, peu de livres; il y avait des praticiens qui s'essayaient à former de meilleurs élèves avec un résultat plus ou moins bon, faute d'instruments de travail.

Pour corriger ce mal, des idéalistes se groupèrent et ouvrirent, en 1840, la première école dentaire: "Baltimore College of Dental Surgery" où tant d'intelligences et de doigts ont été entraînés.

L'instruction fut divisée en deux groupes: le premier groupe appelé "Dentisterie Opératoire" s'adressait à l'esprit: il comprenait l'anatomie, la physiologie, la pathologie et la thérapeutique, l'autre groupe appelé "Dentisterie Mécanique" enseignait le

travail manuel: la prothèse, la soudure, etc. Ces néologismes, inconnus dans la nomenclature médicale et créés pour les besoins de l'enseignement sont encore dans les écoles l'objet des cours qui permet aux élèves d'acquérir la formation scientifique et professionnelle.

De fait, l'art dentaire, il y a cent ans et plus, exercé par n'importe qui, était libre: l'extraction d'une dent n'avait jamais été regardé comme un acte de chirurgie important et il y avait plus d'ambulants que de sédentaires, plus d'arracheurs de dents que de dentistes.

Tous ces empiriques, comme "Le geai paré des plumes du paon" s'intitulaient, sans aucune qualification, "docteur . . . en chirurgie-dentaire" et ne parlaient que de leur salle d'opération et de leur laboratoire au lieu de leur cabinet de travail et de leur atelier pour faire croire que la dentisterie était une profession égale à la médecine et d'amer le pion au médecin-dentiste qui, à cause de sa science apprise dans une université, possédait, de droit, le grade de "Docteur en Médecine".

Si de prémisses fausses on tirait une conclusion erronée, il ne faut pas blâmer Hayden, Harris et les autres qui, malgré l'opposition des médecins, luttèrent vaillamment contre l'ignorance de leurs contemporains en enseignant non seulement la technique mais aussi la théorie de la dentisterie avec le but ultime d'exterminer ces pseudo-docteurs et d'inculquer des connaissances à la jeune génération, qui aura la science et, par suite, le droit de discuter avec le médecin sur un pied d'égalité.

Les cours de la nouvelle école, d'abord rudimentaires se perfectionnèrent vite; ils réussirent à prouver cette hypothèse: que la chirurgie-dentaire est intimement liée à la médecine et à former l'opinion publique à ne plus regarder le dentiste comme un artisan mais un spécialiste des maladies de la bouche.

Avec les années, les écoles dentaires se multiplièrent, elles eurent pour résultat, en plus, d'améliorer l'instruction, de faire suivre aux dentistes un chemin parallèle à celui des médecins, pour arriver au même but: conserver la santé.

Souvent les dentistes ont discuté des causes de la carie dentaire, ils auraient évité maintes controverses, s'ils avaient compris que la maladie est une altération ou une anomalie de l'action physiologique d'un organe vivant que le médecin a le devoir de conserver et de ramener à l'état normal par le régime, la diète, les remèdes et tous les moyens mis à sa disposition par l'art de guérir alors que le dentiste pour conserver la santé de l'être humain se sert d'un matériel inerte pour créer un objet inerte comme une obturation, un dentier partiel ou complet qui remplacera artificiellement l'organe perdu en partie ou en totalité, ce qui n'est ni de la chirurgie, ni de la médecine mais de la dentisterie. Evidemment il lui faudra de temps en temps faire de la chirurgie, de la médecine mais toujours aidé de la prothèse.

Cet art de la prothèse dépend de la technologie et aucune de ses phases ne peuvent être admises dans l'art de guérir en dépit du fait que l'obturation, le bridge ou le dentier rempli la fonction de l'organe absent et a une influence marquée sur la santé.

La prothèse visa d'abord à un résultat uniquement artistique grâce à l'adresse et à l'ingéniosité de l'artisan puis elle visa à un résultat fonctionnel amélioré avec les années par des connaissances scientifiques acquises après de nombreuses recherches où les lois de l'esthétique, de la phonétique et de la mastication furent utilisées pour établir un équilibre esthétique et fonctionnel.

Tout dentiste, indépendamment de sa conception soit biologique, soit technique de son travail doit être orgueilleux de sa profession et ne se considérer inférieur à aucun autre professionnel.

“Mon docteur m’a dit”

par AMHERST HEBERT

De tous les collaborateurs à l'action médicale qui aient eu la franchise de faire des mises au point, il en est un, un brave celui-là (aviateur officier en service actif à l'heure présente) qui a dit positivement: "Je veux faire la part à l'incompréhension de certains gens comme de la négligence coupable de certains praticiens, bref à chacun le sien." (octobre 1939).

"Mêlons-nous de nos affaires . . . mais mêlons-nous en par exemple."—*Mgr Courchesne*.

C'est dur à dire et pourtant c'est encore trop souvent la vérité. Tout au début de cet écrit, qu'il soit pris pour acquis que ce n'est pas un réquisitoire contre les médecins qui font leur devoir et n'ont aucune raison de se froisser. Quant aux coupables, je ne puis m'empêcher d'ignorer leurs récriminations.

Deux exemples absolument véridiques, croqués sur le vif, feront mieux voir notre pensée.

Une jeune femme (nom et adresse au classeur) dont le mari est à l'aise s'amène dans un cabinet dentaire. Examen de la bouche, diagnostic, curetage et rendez-vous pour une séance subséquente. Jusqu'ici tout va bien. Alors qu'il est question d'honoraires, la jeune femme fait l'observation suivante; "Vous savez, MON DOCTEUR est venu chez-nous pour mon bébé et IL m'a dit que je faisais de la pyorrhée et que vous deviez m'extraire toutes mes dents . . . AIE.

Autre exemple: Une jeune fille, accusant bien la trentaine, institutrice d'une classe enfantine de mon district, est dirigée chez-moi avec la même dictature de la part de son médecin de famille. Examen de la bouche . . . denture parfaite, aucune carie, gencives enflées. Traitements prophylactiques sans aucun résultat tangible. Observation du cas pendant une semaine, légère amélioration. Radiographie de toutes les dents, analyse d'urine, bref toute l'histoire de cas qui a permis à votre humble serviteur d'instituer un traitement et local et général qui a sauvé la denture de cette personne à condition que la patiente suive exactement le régime alimentaire prescrit. Tout va bien et tout le monde est heureux jusqu'au retour du médecin de famille qui fait, par ricochet, accourir chez-moi la mère de ma patiente qui chantonne sur tous les tons; "Mon Médecin m'a dit qu'il fallait arracher toutes les dents de ma fille à cause de la pyorrhée qui va l'empoisonner pour de bon cette fois etc. . . en un mot toute la kyrielle que les mamans savent exploiter, fortes du diagnostic posé par le Médecin."

Chacun de nous pourrait y aller de plusieurs cas et la liste serait loin d'être complète de ce que "*L'Médecin m'a dit*" qui contribue plus que tout autre à nous enlever nos prérogatives et à nous forcer à un déploiement de tact essouffant à la longue. Mais, pourquoi ainsi jouer au "dictateur" en posant des diagnostics faux que nous avons le devoir de redresser? De quel droit vous inspirez-vous pour enlever ainsi à un confrère dentiste le privilège de juger lui-même les cas d'origine dentaire et d'en faire ensuite rapport détaillé au médecin de famille? Il semble que chacun dans notre sphère, avons assez à voir et à résoudre sans empiéter sur le terrain des autres.

Ne pensez-vous pas qu'il est temps de cesser de cajoler le culte du Moi professionnel pour développer chez-nous, un peu, le culte de la collectivité? Je sais pour l'avoir observé très souvent que par caractère ethnique, nous sommes de misérables individualistes . . . c'est la malheureuse vérité. Nous ne souffririons pas de ce manque de formation si nous voulions tout ramener à notre évolution sociale. C'est une faiblesse

profonde qui n'est pas incurable. Il n'en reste pas moins vrai que les idées conduisent les sociétés et que la vérité est le phare de notre vie morale.

En un mot, certaines attitudes de praticiens qui composent notre classe professionnelle, peuvent irrémédiablement compromettre cette ascension à la compréhension par ce qu'ils connaissent mal, peu ou pas du tout les chirurgiens-dentistes.

Avec une conception ainsi faussée, le médecin rageur abat sur le dentiste du coin une séquence de rosseries alors que ce dernier avait dans la main une paire de bonnes intentions. C'est une partie de bridge; On mise sur le cœur et la gentilhommerie d'un camarade et c'est la jalousie qui sort. On prépare un discret éloge à l'endroit d'un confrère et on encaisse des critiques destructives. A cause de ce peu de compréhension, jamais, nous aurons même le petit "Slam" des concessions tant que le médecin n'en viendra pas à cette entente déjà préconisée dans l'action médicale.

Encore une fois, je ne veux m'en prendre à personne en particulier et ce n'est tout de même pas à mon concierge que je vais adresser ce qui doit être dit aux médecins.

Article paru dans L'Action Médicale décembre 1940.

Congrès Dentaire de Québec— 5, 6 et 7 Juin 1941

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Cher Confrère:

Nous espérons que tous et chacun seront à la hauteur de la tâche pour faire du Congrès de Québec un "VRAI SUCCES".

VIGER PLAMONDON, Secrétaire.



Courtesy of "The Beaver"
Hudson's Bay Company.



Blue Goose and her nest among the willows.

Photograph taken seventy-five miles north of the Arctic Circle. The nest is a grass-lined cavity with considerable dusky, bluish-grey down.

"What does the word Home mean to you?" was a question we put recently to a number of well-known broadcasting personalities. The following is the reply we received from Mr. Herbert Hodge:—

"When I think of home I think of a person. Wherever she is, that is home. The place changes with the ups and downs of circumstance. She never changes. For the rest it's mainly bed and books. A comfortable bed and a good book; room to stretch my legs and stretch my mind—that's all I ask for. And her, of course. She gives it life. I know whether she's there or not as soon as I enter the front door. If she's out, I climb a dreary staircase to some rather drab rooms at the top of a rather dingy house in Battersea. But if she's in, the stairs are magnetic, the walls alive and tingling. Then, and only then, I've come home."—Radio Times.



FREDERICK J. CONBOY, D.D.S.

Mayor, City of Toronto

President of Ontario Dental Association, 1924; secretary-treasurer from 1925 to present time Director of Dental Services in Province of Ontario, 1924-35 Past President of Canadian Dental Association Member of executive, Canadian Dental Hygiene Council President, Canadian Dental Research Foundation Professor of Dental Praxis, Dental Faculty, University of Toronto Past President, Community Welfare Council of Ontario Member Board of Education, City of Toronto, 1909-1913; chairman, 1914 Member of Council, City of Toronto, since 1935, 2 years alderman, 4 years controller.

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What Makes People Respond? *

by ELMER WHEELER, New York City
President of the Tested Selling Institute of America

TWELVE years ago, as a newspaperman, I set out to find which words win over people, which words lose them. With this in view I started a little business, a word laboratory, a factory in New York that creates words that make people respond to your way of thinking.

We found out, for example, that there are usually just a few words that make whatever impression is made on the customer, the words you can say in ten seconds. Now what could you say in ten seconds to make a woman want to buy a shirt for her husband? We used a sentence and we watched the effect. If it did not work, we used another, and watched that. For instance, you could not sell a shirt to a woman for her husband if you told her there were seven fine pearl buttons on it, and each sewn on with 18 strands of thread, and the collar was non-wilt, and the tail of the shirt was extra-long, and all the other things that go to make up a shirt today. But we found out that the minute the woman came up to a counter, and you picked up a shirt and pointed to a button and said "Madam, you see these buttons? They're anchored on, and they won't pull off", and we pulled on a button to show her—that was what made the woman buy the shirt.

Now did this happen because that was a fancy sentence? No. Because fancy words, like fancy clothes, attract attention to yourself, to your education, your flow of language, instead of to your ideas. There is only one way to make people buy what you have to sell: say something simple. There's only one formula: to know people, and how they live, then say something simple. Know the pains they have with bad dentistry. Know the troubles they have in their home. Say something simple, that the patient understands, and watch him respond.

For example, in connection with the shirt idea. You know how a man gets up in the morning, half-awake—and if you know that you will know how to sell his wife a shirt for him. He gets up in the morning, half-awake; he starts fumbling in the bureau drawer for a shirt. He finally gets hold of the tail of a shirt, he's all thumbs, he may be even shaking a little from the effects of the night before. Well, he finally gets the shirt on, and everything is all right until he gets to that top critical button, when his patience leaves him and so does the button. Now, he has nobody there to blame. President Roosevelt wasn't there to get the blame, and neither was the dealer. What happened? His *wife* was there.

* Presented at the Sixteenth Annual Fall Clinic of the Montreal Dental Club, September 25 1940.

So, like a typical married man, he hollers into the other room, complaining bitterly about the "button that popped off my shirt". With the patience of a Republican his wife sews that button back on while he walks up and down in his under-drawers, the coffee gets cold, he gets in a worse humour than ever, his wife finally gets him out of the house and on his way, and she says to herself (God bless her!) "Why in thunder did I marry him in the first place? A man who gets in a temper and finds fault with such silly little things as buttons on his shirt!" She walks into a department store, and in ten seconds she hears "These buttons are anchored on", and sees the clerk pull hard on one to show that it won't come off.

Now, do you think for one moment that that woman cares about the factual side of that shirt?—collar form-fitting, non-wilt—she doesn't care if it will choke her husband to death. No: she heard one selling phrase — "The buttons are anchored on"—and she said to herself "At last, here's a shirt with buttons that won't come off, that will keep my husband quiet in the morning until I can get him out of the house to work!"

That's what I mean about knowing people and how they live, and then saying something simple: being able to express why they need that work, but in language they can understand. Using technical language the average layman, including myself, does not understand at all is like trying to sell the woman the shirt by explaining the weave of the material to her. When you stand off two feet and cough and professionally say all those grand things about that inlay, maybe there's one simple little sentence that will make the patient respond as you want him to. I know for years I've needed gold inlays, but whenever I would ask the doctor the difference between silver and gold inlays, he'd say "\$15 difference". Then one day, a dentist in Dallas, where

I lived, said something different. He told me I wouldn't have to come back for 20 years — the gold inlay would last longer than the silver. He talked in language I understood, and I bought. Maybe 20 years from now I'll start looking for him, but at least he had a selling story. He used language I understood. I already felt the extra money in my pocket that that inlay was going to save me, and that was enough to sell me on the idea.

I am going to give you a formula pretty soon from our books on how you can build words that win patients, but first I would like to show you that there is magic in words, and you can create your own magic with them.

MAGIC IN WORDS

Now ever since I can remember, my grandmother had been hanging up the washing with clothespins that were round. Then some manufacturer decided to make clothespins square instead of round. I was just as curious as anybody, so one day I walked up to the counter in a little store, I woke up the young lady behind the counter—the Hoover administration was on then and everybody slept behind counters — and I said "Listen, young lady, what's the difference between square clothespins and round ones?" And she said "Three cents a dozen difference. This pile is square and that pile is round." I said "But why are there two kinds? What's the difference?" She said "Aw, some of my customers like 'em square and some like 'em round!"

Naturally, no square clothespins were sold. The dealer didn't know why. He complained; he blamed the President. But what did President Hoover have to do with selling those clothespins? No one was to blame but himself. When things don't sell, don't consider the administration — don't consider anybody except yourself, because it wouldn't make

What Makes People Respond?

any difference who is in office—but it makes a whole lot of difference who is in *your* office. Your little two feet of space and what's in it is the important thing to you. What you do depends on whether the patient says yes, and whether the patient says yes depends on what you say and how you say it, not what presidents or dictators or anyone else says. *You* are the boss of your office, and that little girl was boss, as far as sales were concerned, of her counter.

Now, my guess about what to say to sell square clothespins was as good as yours. So I went to the home office and you should have heard the points they gave me: No. 1—the clothespins are square, and naturally they won't slip out of a wet hand; No. 2, a woman can hold more in her hand when she's hanging out the wash; No. 3, they have a high polish on them and when the wind blows delicate fabrics over the line they won't catch and be injured on the clothespin . . . etc. And the knobs—knobs are not put on by accident, there is a scientific reason for them, and that is they are put on so women can hold them in their mouths when they get so old they lose their teeth—it has all been scientifically thought out.

But now, exactly what could we say to sell these square clothespins, in how many words, and what words?

Words are the important things. Tell me how many words you have in your vocabulary and I'll tell you how much money you have in the bank. Because money in the bank, success, is not in ratio to your skill. There is many a skilful dentist without any patients. It's how many skilful words he has that measures his success. There's many an educated derelict on the street today, and many a millionaire that never went to grammar school. So education is not in relation to your income; but your *words* are always in ratio to your income. The

number of people who come to your office is in direct ratio to the number of effective words you use on a patient.

But to get back to the square clothespin! What we had to decide was which of these sentences to sell that clothespin would be the one to work? I didn't know. Then one day a square clothespin dropped to the floor. And it didn't roll. You know when a woman has her arms full of washing, and she drops a round clothespin, it rolls all over the place—maybe under the stove, and when she stoops to try and recover it she burns her fingers—or maybe she didn't see where the thing rolled to and looking for it she finally backs into it and down goes the woman and the wash, and in comes the doctor and the insurance man.

Now, if we knew this simple little story—"They don't roll"—all the woman had to do was pick up the square clothespin where it fell and go about her business. You could tell her all sorts of things, the wood comes from North America instead of South America, and everybody knows wood from North America is better than wood from South America, and so on, and she would look at you and say "Oh yeah?" and then say to herself "So what?"

Then we boiled it down into a little selling sentence we could shoot quickly at the customer, in ten seconds. Up to ten seconds the patient doesn't know what you're going to say. After ten seconds he figures "He's starting to work on me," and begins to be on the defensive. But if in those ten seconds you say something so important, so dramatic, so powerful, the patient will say to himself "I guess that fellow's right. Maybe I had better do it," and you've sold him.

Well, I took my short sentence back to this same little store, woke up the girl behind the counter, and I said "The next time a customer takes the time to ask you what's the difference between a square

clothespin and a round one, you pick up one of the square clothespins, and you say 'Madam, they are square today, and they won't roll. Look,' then drop one on the counter in front of the woman's eyes so she can see as well as hear, "It won't roll."

That simple little sentence sold so many of those clothespins that week that the store manager began to complain again. He said "Now I'm stuck with the round ones!"

But I want to tell you that in the 8 years that that little selling sentence has been used, 300,000,000 square clothespins have been sold. Think of the woodchoppers, the millhands, the sales people who got work because at the counter the right sentence was used, and started the flow of commerce across that counter! Think of the thousands of people in Canada who chopped the wood to send it to Maine to make the clothespins.

WATCH YOUR WORDS

Start watching your words, and you will see a flow of people coming to you because you are saying things they like to hear, and things that will do them a lot of good. You will not be violating any ethics, gentlemen. It is up to you to sell as hard as you can, and when you don't sell them on what they need, you are letting them down; they are going to suffer because you did not sell them. You always dare to sell anybody when you are doing them some good. Don't call it selling. Tell yourself you are going to influence that fellow on the necessity of having work done this week, and not let him put it off, to his own detriment, because you didn't have the words to make him want that work done now. You had the skill, but you didn't have the words.

So put in a little word laboratory in your office. Start figuring out what to say to the patient to persuade him to get the work he needs done now. Maybe you

are on the wrong track. Maybe you are scaring him away from the needs which require attention.

Somebody recently created two words that are scaring the heart out of everybody in the United States—"Fifth Column". People actually look under their beds every night because of them. That's the effect of two words.

It's up to you to create words to bring the results you want. First we whip the enemy mentally, with words, and then come the airplanes and tanks. We must sit back and create our own blitzkrieg words. Your "Spitfires" and "Hurricanes" — those are good words. We have a good one too "Flying Fortresses" —much better than "big aeroplanes". When you hear one of those words you get those shivers up and down your back. It is words that influence people—take some of those signs to get people to join the army. We have one that says "I want you!" and Uncle Sam's looking at you and scaring you to death, more like a dictator than a dictator himself. Wouldn't it be much better if he'd say "I need you"? There's a great difference between "I *need* you" and I *want* you". You've got to lead people, not push them. Lead them to the chair, don't push them into it.

FIRST SUGGESTION

So now, from our book of tested sentences itself I'm going to pass on to you the formula we've worked out. Here's the first point:

1. If you would like to get yourself a job, a promotion, a sweetheart, or an order, more happiness in the home, more social success, greater business gains: Remember point one:

"DON'T SELL THE STEAK,
SELL THE SIZZLE."

It's the sizzle that sells the steak, and not the cow—the cow plays an important part, it's true, but she doesn't sell the steak. You never saw a steer walking

What Makes People Respond?

through a restaurant taking orders for a slice of steak. But watch a waiter walk through with a steak that sizzles on a platter. First you hear the sizzle, then you see the sizzle, then you smell the sizzle. And it's three to one if you had the money you would buy yourself a \$2 steak that sizzles instead of a 30 cent hamburger that lies flat in the platter.

It's the sizzle in what you say that makes the patient want the work more than the money it will cost. The "sizzle", for example, is the tang in the cheese, the crunch in the cracker, the whiff in the coffee. It's the sentiment on the greeting card you want. Those are the things that sell cheese, and crackers, and coffee. A woman walks up to the counter and picks up a piece of cheese. If it has the tang she likes, do you think she wants facts? Does she say "Tell me about the nanny-goat. What have you been feeding that nanny-goat?" She doesn't care about the nanny-goat. And a clever grocery-clerk a few minutes later, instead of saying "How're you fixed for coffee, lady?" will pick the coffee up, take the top off, very dramatically, take a deep whiff, hold it towards the customer and say simply "Hasn't this a lovely aroma, Madam?" nodding his head up and down, until she smells it and starts nodding her head up and down, and she buys the coffee. Now why did she buy the coffee? Because it was in a blue tin? Because it was in a white paper bag? No. She bought it because of the "whiff", and because maybe that night her husband would use those golden words on her that every husband at least once a year — on her birthday — should use: "Gee, darling, that's certainly wonderful coffee you've got tonight!" instead of "I didn't say anything was wrong with it, did I?"

Don't you see, it's the sizzle that makes people respond?

But before you can sell any service to any patient; before you can use that skill

that you've got, you've got to learn how to sell yourself first. If people like you, they are sold on your skill. If they don't like you, they think you're a horse doctor. Make them like you personally. You've got to find the sizzle in yourself, something people like and admire about you individually. It may be the way you remember their hobbies, or their children's names; it may be the things you say and talk about. Your whole graduation class has the same technique and the same skill; but no one has that particular little sizzle that you have got. It's yours. Nobody can steal it. But remember: watch out that they don't think it's a fizzle. You can guard against that. Talk about "you" instead of "I"—think about him and his likes. Your ability to think "you" and not "I", to say the word "you" and never the word "I" is what counts. "I" is the biggest word in the world—the word "my"—"my home, my car, my children, my fishing trip, my trip to California. I don't care about *your* trip to California, but I'll talk about *my* trip to California, I'll tell you all about it if you'll let me, it'll only take about three hours. Who does a man look for first in that picture of the banquet you show him? He says "Oh look at me, here I am!" then he says "Oh, there's you down there!"

And don't tell the patient what you would do. Who cares what you would do? Nobody. It's only ourselves we think about. That's why, when the patient shows you pictures of his little boy, don't pull out a bigger picture of your little boy to show him. And let him do the talking. All you have to do is say, every once in a while, "Isn't that fine! What did you do next? Then what did you do?"

The first step is to find the sizzle in yourself, and then find the sizzle in your services, from the point of view of the patient, not what *you* think.

SECOND SUGGESTION

The second point is; "DON'T WRITE—TELEGRAPH."

You must get the immediate and favourable reaction of the first ten seconds. You won't have a chance for the next ten thousand—unless you make your impression immediately, that patient will float away from you mentally. So watch out that it doesn't take you too long to express yourself. Learn the art of verbal shorthand. Learn how to speak telegraphically. Don't hem and haw, don't stammer and stutter; don't use such words as "in other words", "what I meant to say", "now to make myself clear". You are insulting the intelligence of the patient. Say it so clearly the first time you won't have to go over it to make him understand. It's too late when you have to repeat what you have just said, because the patient loses confidence in the doctor who has to say "Well, now, you don't quite get me. . ."

THIRD SUGGESTION

Now I come to the third point, which is:

"SAY IT WITH FLOWERS."

By "Say it with flowers" I mean, it's the little thing you do in your office as well as the thing you say that impresses the patient. How you do it is as important as what you do—the professional attitude. If you had a mechanic's uniform on you couldn't convince anyone you were a good dentist. You've got to look like a dentist, and so you put on a clean white uniform. That's half the battle; how you handle yourself. "Many happy returns of the day" means a lot to that little lady; but when I send it with a bouquet of flowers, it means twice as much.

Watch out how you handle yourself. I know a dentist who never lets me see the instruments. Another one I used to go to had them all spread out and jangled them in front of me until I got the day-

lights scared out of me the way he banged them around; it finally drove me out of the office, because what he did was terrible, though what he said was good. But it takes the combination of both to impress me; because we are impressed through the eye as well as through the ear.

ACTIONS IN FRONT OF PATIENT

What you do in front of the patient and how you do it is as important as what you say. You have a swell diploma; you've a skilful training; but nobody else in town has the right words but yourself. And watch out that one little detail does not wreck your whole career, such a little detail as being a nose puller. Don't annoy a patient by being a chin-whisker puller; don't scratch, as if you were itchy all over until the patient is getting itchy too. Don't always hit the patient when you talk to him "You see what I mean?" (slap), then wonder what is wrong with business. Don't get hold of a patient for fear he is going to run away, don't clutch him. Don't always pick things off a patient's shoulders, until the patient wonders if the office is dirty or if he is. Don't let a little detail wreck your business—because it will. It will annoy people, just as one word used all the time annoys and distracts him—even such words as very nice, very nice—it's nice—it's nice, until he comes to expect it and wonder when you'll use it next; and then you wonder what's wrong with business.

FOURTH SUGGESTION

Say your sizzles telegraphically, but say them with the proper gestures, and then you are ready for the fourth point, which you no doubt read about in Reader's Digest. The fourth point is: "DON'T ASK IF, ASK WHICH?"

Always give the patient a choice between something and something. Make sure you ask which instead of if. Ask

him where, why and which. Not do you or how about it.

You read about our experiment with the egg in the malted milk.

Here's what happens. When you take an egg in your malted milk everybody benefits. Every time an egg goes into the malted milk the farmer has more eggs to bring to the city, more money to spend in the city, and more money for dental work. How does the clerk go about selling a customer an egg in his malted milk? Do you think he says "I don't suppose you want an egg in it today do you?" Right away your head starts shaking. He's shaking his head. When my head goes up and down, so does yours after a while from watching me. And when your head is going up and down it's hard to say no, you can't say no when you're nodding your head.

Now, watch the drug clerk. You step up and ask for a malted milk. He holds an egg in this hand, and another in that hand, and he says to you, very simply: "One or two eggs in your malted milk today, Sir?" How can you say no? No what? It's amazing to see the average man's reaction to this. He says "Oh, one egg's enough, thanks", figuring he is getting off pretty cheap.

Coming home on the Santa Fe Chief, I went to get a haircut. The barber said "Oil or plain shampoo, sir?" I said "Plain—" then I happened to think I didn't want a shampoo at all. I said "Where did you get that line?" He said "A man named Wheeler wrote a book about it." I said "I AM Wheeler!"

Once a little Mexican boy sold me a gardenia. He said "It'll make you feel important sir, all day long!" I bought the gardenia. If he had just said "How about a little posy, mister?" I wouldn't have been impressed. But he sold me importance for a dime—and all day long!

So can't you see the importance again,

of picking the right words? Now, for good measure, let me give you one word—the hardest word to argue against. It's the word "Why?" He's not prepared with a quick talk on WHY he shouldn't have the work done; you can always sit back when the patient starts to try to tell you WHY he shouldn't have the work done.

Don't say "Well, listen, Mister, I've only been a dentist for twenty years, and I ought to know!" Don't show up the patient's lack of knowledge. Show them up with your brilliance and you will lose them. It's like inviting somebody over to your house every week and beating them at cards. Let them beat you once in a while. Let the patient be the hero. You just be the treasurer. Whenever the patient says "Well, I don't think I need it. . ." you just say "Why?"

Take the incident of the Hoover salesman. He was trying to sell a vacuum cleaner to a customer, and she agreed she liked the machine, she thought it was reasonable in price, she liked the way it picked up the dirt, but she said, "I'd like to but I think I'll wait till the spring." Everything was all right until she said "in the spring". The salesman could have said "Lady, what are you going to do between now and the spring? Let the house go dirty." She could have said "Well, what of it? You don't live here!" So the minute she said "I think I'll wait to buy until spring", he lowered his voice and said "Madam, *why* are you going to wait until spring?" Well, she couldn't think of any good reason why she should wait until spring, so he sold the cleaner.

FIFTH SUGGESTION

Now for the fifth, and final point. If you want to get yourself a job, a promotion, a sweetheart, an order, more happiness in the home, more social success, greater business gains, remember this—and without this the other four points won't work.

"WATCH YOUR BARK."

The little dog has only one word and one little tail to wag. But it is the tone behind his "woof" and the way he wags his tail that tells you what he means. When he goes like this (gesticulating:) beware. When it goes like this (gesticulating:) it's all right. You may say, I used the right word, but what happened? It is not only what you say, but the way you say it. The best sizzle in the world won't work if you don't use it the right way. Watch the tone of your voice. Talk high, then low; talk fast, then slow; talk ten seconds and let the other fellow talk ten minutes. And smile sincerely, not automatically like the wolf in Little Red Riding Hood. High pressure selling is gone. Use the question mark—whose? when? how, where, what? But watch the tone of your voice. Your words tell me your thoughts, but your tone of voice tells me your mood, and every time you open your mouth you touch the patient with your words, with what you are saying, and how you are saying it. There are three ways of saying "What a man".

When your wife comes home from a matinee where she has seen Clark Gable, she says "What a *man!*" Then she looks at you and says "*What* a man!" The old maid looks under her bed at night and says "What! A man!" The best looking merchandise won't sell, the finest services won't sell themselves, any more than the best looking wedding ring will sell itself, without the intelligent persuasion of somebody's words. Don't think so much about what you want to say as what the patient wants to hear.

Now let's review the five points briefly:

1. Don't sell the steak, sell the sizzle.
2. Don't write—telegraph.
3. Say it with flowers.
4. Don't ask if, ask which.
5. Watch your bark.

And whenever you get into a tough spot, don't argue. Ask him "Why?", and if he uses a "Why?" on you first, ask him "Why did you ask me why?"

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Conventions

77TH ANNUAL MIDWINTER MEETING OF THE CHICAGO DENTAL SOCIETY,
STEVENS HOTEL, CHICAGO, FEBRUARY 17-20, 1941.

MINNESOTA STATE DENTAL ASSOCIATION, MINNEAPOLIS, MINN.,
FEBRUARY 25-27, 1941.

WESTERN CANADA DENTAL SOCIETY, EDMONTON, ALBERTA, JUNE 2-4, 1941.

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL
HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.
Secretary, A. D. Richardson, 1240 Union Avenue, Montreal.

17TH ANNUAL SESSION OF AMERICAN DENTAL ASSISTANTS ASSOCIATION,
HOUSTON, TEXAS, OCTOBER 27-31, 1941.

General Secretary, Aileen M. Ferguson, 709 Centre Street, Jamaica Plain, Mass.

Practice of Dental Surgery*

by HENRY SAGE DUNNING, B.S., M.D., D.D.S., F.A.C.S., New York City

FOR a long time I have been greatly interested in dental surgery and surgery of the face and jaws. I do not like the name DENTIST for I believe that we are all practicing surgery and I think that you all are DENTAL SURGEONS and that you must practice along surgical lines.

The dental surgeon is performing more surgery than ever before. There are three reasons for this:

- 1—Economic conditions make it important for the medical and dental practitioner to refer as few patients as possible to the specialist.
- 2—The use of local anaesthetics makes it possible for the dental surgeon to do quite an extensive operation if he does not cause pain.
- 3—The dental surgeon in the smaller towns located near or on the main highways is called upon to help the general surgeon in the care of many automobile injuries.
- 4—The student is better trained upon graduating, and he has the opportunity of working in many dental clinics where he obtains much valuable experience.

My concern today is that we should train the dental surgeon to be a surgeon. At present oral surgery is only taught in the dental schools and in many cases the course is not adequate. In most dental schools the teaching of operative and prosthetic dentistry is stressed and oral surgery is considered relatively unimportant. The dental surgeon upon graduating sends much of his work out of the office; that is, the construction of his inlays, bridges, dentures, etc., to be made by experts, but he tries to perform the

surgery that he thinks he can take care of and he often gets into trouble because he over-estimates his ability to perform certain operations. The dental graduate should be urged to take an internship upon his graduation and if he is going into surgery he ought to become connected with some hospital clinic where he can continue treating not only surgical patients but also continue the study of disease.

One of my chief criticisms of the dental graduate today is that he does not realize when he is dealing with a sick person. He may plan an elaborate dental reconstruction program or a severe operation without realizing that the patient is not in a fit physical condition to withstand such procedures. I am anxious to send the dental graduate to his practice with a feeling that he is a surgeon and not a mechanic, that he is a member of the great family of physicians and surgeons, and to teach him how to "size up" his patient, and to make a careful examination which will be well recorded on a sensible chart, to enable him to make a correct surgical diagnosis, and to give the patient a painless and aseptic operation either in the office or in the hospital. This service should be comparable to the service rendered by a first class oto-laryngologist or any of the other surgical specialists.

The dental surgeon should feel that the patient is his first and only real concern. He cannot for one moment think that the laws that govern his professional activities are different from his surgical confrères. If he causes a break in the continuity of the skin or mucous membrane which produces a flow of blood, he is a surgeon. Some one has said that it is difficult to distinguish between minor

* Presented at Annual Fall Clinic of Montreal Dental Club, Sept., 1940.

and major surgery, that minor surgery may become major surgery in a few hours. I have seen this take place many times and I have felt happy in knowing that in most cases patients, when they have become dangerously ill, have been surrounded by all the benefits that a great hospital could give them. We must give the patient our best efforts and all the skill, knowledge, sympathy and kindness that we possess. In order to do this we must keep ourselves in good physical condition and have some intelligent plan of action in treating our patients. We know that people come to us because they have some kind of trouble, real or imaginary. To them it makes very little difference. It is our job to find the real trouble. I am sorry to say that too many dental surgeons are apt to take things for granted and many will operate upon the receipt of a slip from another dentist telling him what to do. The idea of operating upon a patient because someone else has marked up a chart is a very poor plan. No surgery should be performed unless the operator feels that there is a definite reason for such an operation. This is not practicing surgery as surgery should be practiced, and this sort of thing does not in any way "enhance" the practice of dental surgery.

OBJECTS OF SURGERY

The object of every type of surgeon is three-fold:

- 1—To relieve suffering, to make the patient comfortable if possible.
- 2—To remove pathosis or disease, generally the cause of the trouble.
- 3—To repair injury that might have been caused either by disease, injury or surgery.

DIAGNOSIS

The above should be uppermost in our minds, and in order to carry out this line of action we must make a careful diagnosis in order to know what we are going to do. A careful examination is made of

every patient after the history has been taken, even when a tooth is to be removed. We must be satisfied from our findings that such and such is such and such without taking anybody else's word for it, for the operator alone will be held responsible for the outcome of any type of treatment rendered. The dental profession at present is very keen about diagnosis. There have been many courses given in oral diagnosis and it is carefully taught in all of the dental schools. A diagnosis is made by correlation of the principal points in the history with the clinical findings and is helped by special agents such as radiograms, biopsies, cultures, etc.

All physical disturbances or troubles can be classed under the four old headings:

- 1—Mal-formations, congenital and acquired.
- 2—Inflammation or disease.
- 3—Trauma or injury.
- 4—Neoplasms or neogrowths.

We should never try to make a snap shot diagnosis except for "fun". It may get us into trouble. Every diagnosis should be made by elimination. We must, to the best of our ability, prove to our own satisfaction that our diagnosis is correct before attempting to treat the patient. At this time, I would say that if the patient is not entirely satisfied with our findings, it is always a good idea to suggest a consultation. I think that the bigger the surgeon is the more he will welcome the opinion of one of his colleagues.

TREATMENT

We have stated that the treatment of the patient depends on the diagnosis. All treatment, is divided into:

- 1—Medical, dental medicine.
- 2—Surgical, dental surgery.

Many of our cases need the attention of a good medical man in conjunction with our services, and we should co-

operate with the physician as closely as possible. It is impossible for the dental surgeon to keep up with the strides that have been made in modern medicine. And I believe that we should be very prompt in referring patients with medical symptoms to the proper physician for treatment when they come to our attention. Having taken care of the medical side of the picture, we now come to the surgical treatment of our patient. We must decide:

- 1—What type of an operation the patient requires
- 2—Where it should be performed, and
- 3—What kind of an anaesthesia is the best for this special case.

The operator is the judge as he knows better than anyone his ability to do such and such under certain conditions. All operative patients are divided into office and hospital cases and the dental surgeon must know when to send his patient to the hospital for surgical care.

If more dental surgery was performed in the hospital, the doctor and the patient might be better friends in the end. Too many operations are attempted in the dental office that have to be completed in the hospital at a later date. It is imperative that the surgeon should be on the staff of some good hospital in his community if he is to practice surgery, as I have pointed out earlier in this paper.

Wherever the operation is to be performed, we must have a definite plan of procedure, good assistants, the right anaesthetic and proper instruments, and sterile supplies. Many operations have failed for the lack of one or more of the above. Many failures have occurred on account of the inadequate preparation on the part of the surgeon, due to his inability to judge the problem in hand. If the operation is to be done under local anaesthesia, the operator should be kind and firm, and have plenty of confidence in himself. His confidence and his cheer-

ful demeanour should be so infectious as to, as nearly as possible, make the patient feel that both he and the doctor were going to have a pleasant adventure. I often tell our students to keep talking to the patient, about anything that has nothing to do with the operation. Keep him interested and do not operate in a glum silent manner that suggests that you are not vitally interested in his every comfort. Most patients who are to have a fairly extensive operation performed, can be helped mentally by the administration of some kind of sedative given about an hour before the operation whether the anaesthetic to be used is general or a local agent.

ANAESTHESIA

Regarding the anaesthetic to be used, you are the operator and you alone are responsible for the outcome of the operation. I do not think that we ought to try to please the family dentist or the family physician if by so doing we embarrass the treatment of the patient. I do not see any reason for placing a person under deep surgical anaesthesia unless it is definitely indicated. If general anaesthesia is desirable, a good anaesthetist should administer the drug and the patient should be surrounded by all the precautionary measures possible, whether in the office or in the hospital. I am sure that nitrous oxide and oxygen anaesthesia, is the most difficult anaesthetic to give when the mouth is open as it must be for an oral operation. I say this with great conviction even though this gas was first used by a dentist, Horace Wells, and has been used by the dental profession for a great many years.

The operator alone can decide what type of anaesthesia should be given after a careful examination of the patient who is to be operated upon.

OPERATION

As to the operation, it must be performed with the best surgical technique

possible, painlessly and with as complete asepsis as can be maintained. There should be a minimum amount of shock to the patient, and little trauma to the parts and all wounds should be left in the best possible condition for early healing. We must know when to suture and when to drain. We should guard against accidents, lacerations of the soft parts, fracture of the roots, alveolar process, the tuberosity, dislocation of the mandible, openings into the antrum, roots in the antrum, sharp edges of bone, injury to adjacent teeth, breaking of instruments, needles, etc. We should have all pathological tissue examined carefully under the microscope and keep a record of the findings. There is always a chance of things going wrong in any operation and I think that the surgeon should tell the patient in a quiet way, when the operation is not successful, repair the injury and finish the operation as soon as possible.

I am positive that any one performing much surgery will sooner or later run into trouble. There is always a certain amount of "grief" attached to our calling even though we do everything that we possibly can to guard against untoward incidents. One of the main objects of this paper is to try to point out some of the "pitfalls" in the practice of dental surgery, so that the younger men entering this field will not only find it more attractive, but will also avoid some of the unpleasantness that we older men have encountered in the past.

POST-OPERATIVE CARE

In conclusion, I would say that the post-operative care of the patient is in many cases almost as important as the operation, and that many dental surgeons do not seem to appreciate this phase of our work. Every post-operative case should be carefully "deposited" in a quiet room and made to rest whether they

have been given a local or a general anaesthetic. They should not be allowed to leave the office unless discharged by the operator with full post-operative instructions as to what to do. It is difficult to tell how the administration of drugs, an anaesthetic, and an operation will effect a person. The reaction of each person is different and we must endeavour to guard each patient individually.

The surgeon should have a definite follow-up system so that he will be sure to see the patient not longer than two days after an operation of any importance. If they do not return, they should be communicated with and the surgeon should call upon them if they cannot come to him. The patient should be able to get in touch with the doctor day or night and weekends, as he is responsible for their condition. This is most important in cases of infection as these cases should be seen every day by the surgeon or his assistants. If this cannot be arranged, I feel that the surgeon should not become involved in the case and that the patient should be referred to someone else. I have tried to point out to you some of the phases of our work that seem to me to be important. It is all very old advice, and I would not have bored you with it, if it were not for the fact that I constantly see cases that have had a difficult time of it due chiefly to a lack of training on the part of the dental surgeon who has had charge of the patient. I have dealt mostly in this paper with generalities, but I hope to go into some of the details of our work with lantern slides to follow.

In closing I wish to thank you for your attention and to express the opinion that experience is the best teacher and that any man who practices surgery, should give a certain part of his time to clinical and hospital work. No practitioner is too busy to do this, if he has time to practice surgery at all.

The Responsibilities of a Dental Service

By FRANK M. LOTT, Colonel, Canadian Dental Corps

THE direction of the dental service in the armed forces of nations has generally been the responsibility of the medical service.

The Canadian forces have followed this rule with the exception that during the period of the last war, the dental service in England and Canada was directly administered by the Adjutant-General.

Times have changed, however, with the rapid advance of medicine and dentistry in the past twenty years. The medical task itself has increased enormously and we have reason to feel that the proposal of the Canadian Dental Association for a separate dental Directorate was viewed by the medical authorities with a sense of relief. Certainly, it was with the concurrence of the R.C.A.M.C. that the following Routine Order was promulgated.

"The Director of Dental Services will be responsible to the D.G.M.S. in all matters of general policy pertaining to the health of troops. In all other matters, including those having to do with organization and administration, the Director of Dental Services will be responsible direct to the Adjutant-General.

The same chain of responsibility will have effect in Districts and in Formations of the Canadian Active Service Force."

This is the complete Order worded in the brief but comprehensive style of characteristic army instructions. Let us examine it for a practical understanding of the full meaning of it.

The relation of the Director of Dental Services (D.D.S.) to the Director-General of Medical Services (D.G.M.S.) is readily understood with a brief explanation.

It is freely admitted by everyone that the professions have been separate since 1840 on this continent and will probably continue to be separate. On the

other hand, the professional activities of the two Corps continually mix in such a manner as to demand close collaboration of the two services. Thus, while the great bulk of the work of the C.D.C. can be done without reference to the R.C.A.M.C. in any way, there are activities in which the two services must assist each other. For example, an outbreak of Vincent's Infection may be detected by either. The medical officer would be badly extended to cope with it without the dental officer to render the actual oral treatment. On the other hand, the dental officer cannot control it without the assistance of the medical officer regarding hygienic measures such as, perhaps, the sterilization of dishes, utensils and cutlery, the segregation and, on occasion, the hospitalization of patients.

The fact that dental and medical officers are thus co-operating on an even footing throughout the services speaks well for the efficiency of the arrangement. In truth, so well are they co-operating that a short time ago, the writer sent this letter to the D.G.M.S. in appreciation of the R.C.A.M.C. attitude.

"I wish at this time to write you a personal note of appreciation regarding the attitude of your Medical Officers, whether of Army, Navy or Air Force, right across the continent.

Almost every day brings in some new evidence of assistance. It may be a sharing of hospital space, the loan of transport, or any of a number of other actions showing a spirit of kindly co-operation that is highly appreciated by all members of the Dental Corps, and cannot fail to react to the benefit of both services.

If you can include this message in any Circular that you send out to these gentlemen, I shall be very pleased."

The next statement in the Order is that the D.D.S. is responsible directly to the Adjutant-General in all matters having to do with organization and administration of the dental service. And since the

Dental Corps is charged with the responsibility for dental treatment in the Royal Canadian Navy and Royal Canadian Air Force, the D.D.S. is similarly responsible to the Naval Secretary and the Air Member Personnel.

These obligations might be interpreted as follows:

1. The formulation of all Corps policies.
2. The recommendation of officers for appointment and the enlistment of other ranks to complete the various establishments.
3. The administration and internal economy of the Corps including military and technical training, discipline, etc., of all ranks enlisted in or attached for duty to the C.D.C.
4. Financial estimates and appropriations.
5. The choice and design of equipment and supplies.
6. The purchase of and the responsibility for all technical stores.
7. The provision of dental clinic accommodation.
8. Research in connection with technical problems peculiar to the forces.
9. Reports and statistics as required.
10. Dental treatment in the forces.

Field Service Regulations, Part One, details this last responsibility as follows:

- (1) The dental care of the soldier.
- (2) The provision and repair of artificial dentures.
- (3) The treatment, in conjunction with the medical service, of injuries about the jaws and mouth.

"THE DENTAL CARE OF THE SOLDIER", is a very general statement. Specifically, it should embrace:

- (1) Dento-oral examinations. These should be made on enlistment and at specified intervals thereafter.
- (2) Diagnosis.—This will not only have a bearing on the health of the tooth or teeth involved but, in conjunction

with the medical service, it will aid in the elimination of foci of infection.

- (3) Treatment.—This should include:
 - (a) The preservation of teeth by means of treatment or fillings.
 - (b) The replacement of lost teeth by fixed removable or complete dentures.
 - (c) The prevention and treatment of diseases involving oral tissues other than the teeth.
 - (d) Documentation.
- (4) Oral Hygiene.—This means the instruction of military personnel on the subject of oral health.

"THE PROVISION AND REPAIR OF ARTIFICIAL DENTURES" is thus not made a separate division as in Field Service Regulations. The only reason the author can give for the British grouping is very likely the historical relation. Formerly, the denture had no place in British Army dentistry. When the situation changed, the occasion was probably felt to be sufficiently important to justify a special statement.

"THE TREATMENT, IN CONJUNCTION WITH THE MEDICAL SERVICE, OF INJURIES ABOUT THE MOUTH AND JAWS"—can also be elaborated.

- (5) Injuries about the mouth and jaws.—This will include the reduction, immobilization and treatment of fractures, assistance with plastic surgery and the construction of appliances.

The final paragraph of the Order stating that the same chain of responsibility will have effect in Military Districts and in formations of the C.A.S.F. was necessary for its application in Canada and abroad. Incidentally, the references to M.Ds. and C.A.S.F. are now out-dated. Since the time the Order was issued, there have been added the Naval Coasts and the Air Commands, and the term C.A.S.F. has been altered to C.A. (A.F.) or (R.F.)—Canadian Army, Active Force or Reserve Force, as the case may be.

Practice Management

Psychological Principles Which Promote Professional Practice

by LOUIS R. HILL, D.D.S., Los Angeles, California

(Condensed from *Jour. of Michigan State D. Society*)

A PROFESSION that makes money its primary consideration cannot survive. It is doomed. On the other hand, a professional man who makes money no consideration is likewise doomed. Today there is nothing inconsistent in a professional man receiving a fee commensurate with the cost of producing a worthy service to his patient.

Psychology in recent years has devoted itself to a study of business and professional problems. Professor Copeland of the Harvard School of Business has said: "In every purchase we make, we use only 15% reason, and 85% emotion."

It was discovered in a survey that 95% of women bought a certain talcum powder because of the fragrant odour and 5% because of the appearance of the container the "smell" came in. Apparently any mention of antiseptic quality, purity or other virtues was shot over the heads of these lovely women. In California a raisin company decided to launch an advertising campaign setting forth the health giving properties of raisins because of their rich content of iron. The pulling power of the advertising was found to be 7%. Dismayed by the results they changed the advertising to stress the taste of the raisins. The pulling power of the new advertising soared to 93%.

Why not recognize the patient coming into the dental office as an individual dominated by feelings and emotions. A profound principle behind all applied

psychology in dealing with people is that whenever you leave a man feeling better satisfied with himself than he was before you met him, that individual likes you. There are numerous implements whereby we may bring about such results. Obviously, it is most important in professional life that people like us. So, it has been found that when you compliment or praise the accomplishments and the hobbies and evince interest in dogs, cats or other pets of an individual, you cause him to like you better.

People crave sympathetic understanding. Extend more of it and you extend the limits of your service.

Whenever we recall to a patient some experience, some incident or preference he has mentioned at a previous time, we strengthen our hold on this patient because he feels we are interested in him as well as his professional problems. Every case history should embody some particulars of the patient's personality.

Donald Laird says in handling people the most important thing is to buoy up the other fellow's self esteem and to avoid as you would a plague doing anything that undermines or impairs his attitude toward his self-regard. A man may deflate himself, but he will not tolerate another man doing it. But incidents derogatory to the patient's ego are all too prevalent in professional offices.

There are certain fundamentals in handling a reception room for reception-

ists, assistants or secretaries to observe. It seems to me that an assistant should make her appearance in the reception room reasonably soon after the annunciator proclaims the presence of someone; that her expression should indicate her pleasure at their presence, irrespective of what the person's mission might be; that she should welcome him cordially and put him at ease. She should tell him about how long it will be before professional service will be accorded by the doctor if he seeks professional service and she should perform any small acts that would minister to his increased comfort, remembering the ego principle and the importance of causing people to feel better satisfied with themselves. So often assistants will dash into the reception room. They are in a hurry, they have other things to attend to. They come in with a crisp attitude which seems to imply 'What do you want? Important work is going on inside.' The assistant says: "I'll be with you in a moment," (emphasis on the 'I') and disappears. Now this curt manner and some of the long faces assistants wear in many offices have led me to think that perhaps somebody had died inside which was responsible for the hurry and confusion. If the assistant would only pause for a moment and pleasantly say: "Good morning, I will be with *you* in just a moment" the effect of the emphasis on the "you" would be so tremendous that the individual would feel the welcome. Remember, more accent on the "you" assures a patient that you appreciate his importance. And it's going to shock some patients because they have never been accustomed to a kind approach upon entering a professional office.

A reception room is a culture tube in which goodwill or illwill is incubated. What an opportunity for assistants to cultivate the goodwill of patients by the proper management of this room!

Dr. Frank Dunn wrote in the June 1935 issue of "Oral Hygiene" an article entitled "A Call for Mr. Snooty." In it he set forth how many snooty professional men there were who imagined they were laying up a great store of good for the future by having patients wait in the reception room. Today, time is of great moment. Whether it is due to the emotional pressure or to the strain and stress of our everyday life, today time is becoming increasingly important. People don't like to sit in professional offices and wait, yet many dentists make a studied effort to keep people waiting, thinking it adds to their importance if the patients have to wait awhile in the reception room.

I wonder how many inferiority feelings are caused by unsightly teeth, and because of the absence of some members which cause hollows and wrinkles and sagging mouth corners! I wonder if we appreciate how we may lift individuals mentally and make them feel better able to meet the world, by picturing to them the enhanced personal appearance which will follow proper dental care and replacement. When we point out to patients how dentistry can contribute to greater adequacy, it becomes more appealing to them and their desire for it increases.

I note, as I go about the country, that women are still making use of lipstick. It seems to me that they are doing more advertising for dentistry in this manner than is being done by almost any paid publicity. This crimson border with which they frame the teeth, constantly calls attention to them. It is a wonder with all this help that we can't talk to women more frequently and in better terms, about their personal appearance. One of the findings of a vast business survey conducted several years ago was that women pay considerable attention to personal appearance. They constantly are thinking of appearance and it is more pleasant to speak to an audience of women

today than it was fifteen or twenty years ago, thanks to their great attention to personal appearance. But women have always been motivated in this direction. Why is it then, that we, as dentists, don't talk about it more? It is our greatest selling point to our patients—personal appearance—and we should make the best of it. Dentists are constantly thinking that the health appeal is the great appeal to patients but unfortunately it is one of the weaker ones. The only time in any survey that the health appeal showed any marked superiority was when they asked people, "Of certain appeals, which are the most important?" When the people saw health listed they said, "That's it, health," and put it at the top. But when they were questioned in a different manner, they put health almost at the bottom of the roster. What an admirable opportunity the profession has to serve! Because people live in their feelings, they are interested in how they look; and in taking care of this desire we could restore at the same time some of the health that is ebbing. Then the patient's best interests are served, his superficial interests are also served, and he is happier thereby.

It has been found that women as a sex are greatly interested in the impression they make on other people and what other people say about their appearance. Therefore, it seems that they buy unconsciously from a motive of envy or jealousy. Rivalry, whether it be recognized or not, wells up to the surface constantly. The dentist who cares to make use of this principle can almost write his own ticket for the future.

It has been found that women have greater sensory acumen than men. They excel men in the use of their senses. It is said the average woman can run her finger over the top of a surface and feel imperfections that would be totally missed by the average man. Business surveys

have discovered that these women buy more for the quality of the exterior finish than they do for the quality beneath the finish. It would seem that there would be a great lesson for dentists in this finding. We should see that our work is lustrous, highly polished, and free from pits. We should let all patients, especially women, handle, feel and examine dental demonstrating cases. When you show these to patients most of them want to handle and examine them. Give them the opportunity.

Woman's reaction time is slower on the average, than man's and they are more conservative. Surveys have shown that they respond 75 per cent slower to the change of a traffic light, are slower than men to pick up a telephone receiver after the bell rings. Their reaction time being slower and having greater conservatism, women deliberate longer. It takes them longer to reach a decision, therefore a dentist should be exceedingly patient with women patients and should explain thoroughly and give them plenty of opportunity to talk about the particular service before they buy.

It has been found that women as a sex are greatly interested in the economy appeal. Anything, whether it is subtle or obvious that tells them how they are going to save, is of great interest to women. Therefore, we should, whenever possible, tell our patients that it is wise to select a particular type of dentistry because it is more economical. "You save so much this way." "You get more for your money." "It is so economical," are all phrases women like to hear. Notice almost any advertisement today somewhere touches on the economy appeal because advertising men know it pays to emphasize it.

It has been found that one and a half times more women than men are too sensitive for their own good. If that be true, what action should we take in our offices?

Any hint of sarcasm, impatience, indifference, impoliteness, or haughtiness must be screened out of our conversation or our approach to women. Floor-walkers realize that women must be treated like queens in stores or they go elsewhere to buy. The head of one of America's largest corporations said that values are important, prices are important, but that they are secondary to the good handling of the patrons that come there to buy. He said if he had a sales personnel—no matter how quick and alert they were, if, in handling patrons, they treated them with sarcasm, impoliteness, impatience or arrogance, they had to change or get out of the organization. "Or," said he, "they will put us out of business, because important as are values, locations and prices, they pale into insignificance compared with treating people well in order to transform shoppers into buyers." And yet, in so many dental offices we hear the dentist say: "She was only a shopper, so I got rid of her in a hurry!" That is all the stores have to do business with, shoppers whom they hope to translate into buyers.

People like to be remembered, and they like to be called by name. Any assistant and any dentist who develops the faculty of remembering patients' names warms the heart of the patient, and the dental service, strange to say, is more appreciated. How you do this is a basis of much interesting comment and work, but anyone who will make the effort to learn the patient's name, call him by name when he enters, and mention his name often during conversation, will delight that patient.

All people, but especially women, cannot tolerate negative expressions and, yet, I believe about 75 per cent of the conversations I hear in dental offices are negative. You hear so few positive statements.

The dentist's vocabulary is studded with hurtful words. I constantly hear such words as scrape, grind, file and curette.

By supplanting these with the word 'smooth' it would be more acceptable to the patient. If we only considered our conversations with patients for one month, if we studied how many negative expressions they contained, and then if we did something to sift or filter out these negations, it would be a great boon to patient and dentist.

What happened in gas stations when the attendant said to the customers 'how many?' He got the customary answer 'five.' But today the alert attendant says 'shall I fill her up?' and before you can think you have answered 'yes.' It's natural.

When patients telephone asking for an appointment I hear dental assistants giving these negative thoughts—(so overjoyed that anyone has called, you can't blame the young lady for trying to please): "Well, what time would you like to come, in the morning or afternoon?" Anytime you give a patient a choice between two times of day he begins to founder and deliberate. I heard one woman when the assistant asked that question take up Monday, Tuesday, Wednesday, Thursday, Friday and Saturday and find she couldn't come at all. Apparently that is why she 'phoned! This may seem like levity. I assure you it is true. When the patient 'phones and asks for a time, instead of speaking about an 'appointment' use the word 'reservation' or 'reserving time.' It would be better if we discarded the term 'appointment' entirely. When a person reserves something, it seems to be more valuable to him. Many dentists who have adopted this suggestion assure me that patients have a greater respect for the word 'reservation.' Were your assistant to ask the patient who is 'phoning, 'Will Tuesday afternoon at 2:00 please you, Mrs. Brown?' Mrs. Brown may oblige with a 'yes' response. Remember, words containing 'e' are easy words to accept. Examples of this are

the words please, convenient, agreeable. Never offer a patient two times—that is, never inquire 'will Tuesday afternoon or Thursday afternoon be convenient?' Wait until your patient has committed himself negatively before you offer another time.

The word 'extract' is a hard, harsh, sharp word and should find no place in your vocabulary. The word 'remove' is a soft, gentle word, easy on the emotions.

Too often we crowd too much into one presentation. If we started with the appearance appeal, if we stressed the comfort appeal, if we talked about the taste appeal which is something so few den-

tists do effectively high-light, and if we emphasized the economy appeal, dental service would take on new meaning.

In conclusion, remember the words of Dr. Fred Moss, of George Washington University. "It is quite as important to know what kind of patient the disease has as it is to know what kind of disease the patient has." Man is a psychological study. The dentist who is interested in making that study and applying the knowledge he acquires from it, has rewards ahead of him beyond his fondest dreams.

Reception of Patient

by HENRY C. BLACK and ALLISON E. SKAGGS,
in Jour. of Michigan State D. Soc.

FAR more dentists handicap their professional progress through not having a secretary or office assistant than through having one that they do not need.

The next time you walk into your own office, try and imagine yourself to be a patient walking in for the first time. What is your impression in general of the waiting room? How promptly are you greeted? Is anything lacking? The first impression a patient receives upon entering your office is important, and much can be done by your assistant to make that impression a favourable one. Many patients coming into the office are uncomfortable, and the ability on the part of the assistant to anticipate and answer their questions in a businesslike yet sympathetic, friendly manner lends an air of competency and reassurance which has far-reaching results. The patient should be greeted immediately, told whether the doctor is in, and told about how long it will be necessary to wait. He should be

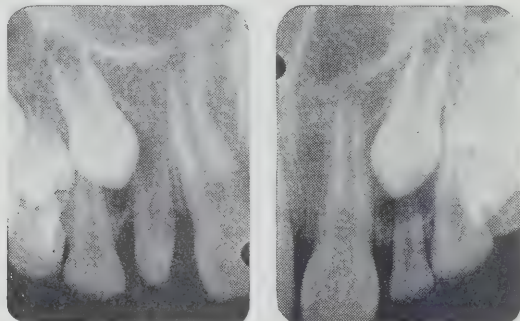
called by name, made to feel at home, and put entirely at ease.

The manner in which the telephone is answered and appointments are arranged has something to do with the dentist's success in getting and retaining his patients. While each dentist may feel that he wants his telephone answered courteously, many do not go to the trouble to test telephone voices when hiring an assistant, and then to train the assistant in just exactly the manner which will help to build business.

Patients coming in just to pay on accounts should never be kept waiting and should be treated with utmost courtesy and privacy. Do not forget that these payments on account may be the last impression the patient is going to have of you and your office until the next time he needs dental service, and it is just as important that he should go away enthusiastic about the attention he has received while making a payment as it is to please him while doing the work.

Problems in Practice

Our readers are invited to send in their problems in practice to the editorial office, 314 Somerset Building, Winnipeg. These questions will be submitted to prominent dental authorities and their replies sent to the one asking the question. The more interesting subjects will be published in this section of the Journal over the author's name unless otherwise requested.



PROBLEM FROM ALBERTA:

The accompanying radiograms show the upper left and right anterior areas of John S., age 9½ years. The right permanent lateral is congenitally missing and the left permanent lateral is peg-shaped. The roots of the deciduous cuspids are unabsorbed. From the standpoint of aesthetics, facial contours are quite satisfactory with the present size of the upper arch. The labio-lingual position of the anterior teeth is about normal. The deciduous molars and first permanent molars are in good relationship. Other mouth conditions are normal.

The problem is what, if any, action should be taken at the present time?

—*John W. Clay, Calgary.*

REPLY FROM QUEBEC:

I take it that there is normal mesio-distal relationship of first permanent molars and normal facial lines.

I would have extracted the peg-shaped lateral on the left side and closed the spaces entirely, approximating cuspid and

central on either side and moved the posterior teeth on either side one incline-plane forward. This would guard against there being any permanent spaces between central and cuspid in the anterior region and do away with the possibility of a jacket crown or bridge work replacing missing lateral.

Preparatory to beginning treatment I would have removed deciduous lateral on right side and deciduous cuspid on left side assisting the eruption, as speedily as possible, of the permanent cuspids.—*A. W. McClelland, Montreal.*

REPLY FROM ONTARIO:

A practical solution to the problem presented in this interesting case would be the extraction of the upper left hypoplastic permanent lateral as well as the deciduous right lateral to permit the eruption of the permanent cuspids into the position normally occupied by the laterals. When fully erupted, the tips of the cuspid crowns may be trimmed and the lower third of their crowns reshaped

somewhat to resemble laterals. As the roots of the deciduous cuspids show no evidence of resorption, these teeth may be retained indefinitely. If, however, resorption of their roots occurs at a later date, and they are exfoliated, orthodontic treatment to move forward the bicusps and molars may be undertaken or a suitable restoration may be supplied.—*G. Vernon Fisk, Toronto.*

REPLY FROM ONTARIO:

It is difficult to decide definitely the best method of procedure in this case without seeing the patient, or having models of the teeth and jaws or photographs. The x-ray films are well taken and are a great help. The data says the facial contour is good. My opinion based on the information at hand is as follows:—

The deciduous right lateral could be removed and also the left deciduous cuspid. The deciduous right cuspid would be retained, so long as its roots were not absorbed in this first plan of treatment. This would allow the permanent cuspids to erupt further. It might be necessary to use an alignment wire to guide them into proper positions. When the cuspids had been placed in nice alignment it might be possible to gradually, a little at a time, trim the right cuspid to resemble a lateral. Of course, you will have the peg-shaped lateral on the left side and this might not produce a nice appearance.

It might be necessary, to produce the very best aesthetic result and the finest occlusion of the premolars and molars to create proper spaces in both upper lateral incisor areas and place a porcelain jacket crown on the peg-shaped lateral and an artificial tooth in the upper right lateral space. If the patient were a girl the above procedure would be indicated much more than in this case. This latter procedure would require a lot of work and take some considerable time to accomplish, so I think it would be advis-

able to try the first suggestion and if the result was acceptable to all concerned let it go at that. If not then the other method could be resorted to, in which case the deciduous right cuspid would be removed and the permanent cuspid moved distally bodily into correct position.—*Sydney W. Bradley, Ottawa.*

REPLY FROM MANITOBA:

Decide how you want this case to be when completed. Are you going to keep the full complement of teeth, replacing the missing lateral by artificial substitute and placing porcelain jacket crown on peg-shaped lateral or will a better result be obtained by extracting the peg-shaped lateral, placing upper cuspids next to centrals and the rest of upper teeth in mesial position to normal?

If you decide on the first method, extract the upper right deciduous cuspid to see if the cuspid will possibly erupt in normal position. I doubt if it will be necessary to place a space retainer but watch the case carefully.

If second method is chosen extract upper right deciduous lateral and also peg-shaped lateral. The upper first molars should be placed mesially before eruption of second molars.

From the information given it is impossible to say which method to adopt. The first method will probably mean shorter orthodontic treatment and possibly give a better appearance but means that the patient will always have to use an artificial substitute.

While closing the space may mean a longer orthodontic treatment it will mean no artificial substitute and will probably be quite satisfactory from the point of aesthetics.

Before either method is decided upon, models must be made and full mouth x-rays taken. Then the case should be fully explained to the parents and their preference should be given serious consideration.—*Manly Bowles, Winnipeg.*

The Forum

• A PRACTICAL CONCEPT OF THE AETIOLOGY OF PERIODONTAL DISEASE

by SAMUEL CHARLES MILLER, D.D.S., College of Dentistry, New York University

SINCE their first mention in the Ebers Papyrus, 3,000 years ago, confusion and empiricism have existed concerning the cause and treatment of diseases of the gums. In some quarters, this perplexity still persists. Yet, sufficient knowledge is already available to explain the mechanism of these diseases, responsible for the loss of at least one-half of all teeth. A large part of the blame arises from the viewpoint that periodontal disturbances constitute a single disease with many manifestations rather than a combination of a number of disease entities. The more correct term would be "periodontal diseases" since the periodontal structures are subject to many distinct affections. In studying causation, the search should not be directed toward a single factor, but rather toward the discovery of a combination of factors, each of which may produce or accentuate a certain type of periodontal disturbance.

The disorders under consideration are primarily dysfunctional, creating a "*locus minoris resistentiae*". From a practical viewpoint, the aetiological factors may be grouped as follows:

I—FUNCTIONAL

A—Overfunction.

Occlusal trauma.

- 1—Excessive stress on teeth.
- 2—Insufficient periodontal support.
- 3—Too powerful masticatory musculature.

B—Underfunction.

- 1—Nonocclusion. — Two or more

opposing teeth do not make contact with each other in any of the excursive relations.

- 2—Premature wear. — The morsal surfaces are worn too rapidly either through a coarse food diet, an acid decalcifying environment, or improper artificial shaping of the teeth or restorative procedures. In such cases the periodontium does not receive sufficient functional stimulation through pressure on the cusp inclines in chewing.

C—Abnormal habits.

- 1—Unilateral mastication. — This may be initiated by a painfully erupting third molar, a missing tooth, a sensitive cavity or some inefficiency of the teeth of one side, creating a habit of chewing on the other side. The result is loss of tissue tone and disease of the insufficiently used side.
- 2—Abnormal biting habits. — The biting on foreign objects or materials for which the teeth are not intended, e.g., fingernail-biting, pencil-biting, lip-biting, thread-biting, etc.

II—IRRITATIONAL

A—Calculus.

- 1—Supragingival (salivary).
- 2—Subgingival (serumal or serumal).

- B—Improper toothbrushing. — Vertical, rotary, or crossbrushing can produce gingival disease. Massage of the gum tissue by the toothbrush, improperly performed, not only is of no value but often is damaging.

C—Food impaction.

- 1—Vertical.—The forceful wedging of food against the gum tissue by chewing pressure.
- 2—Horizontal.—The pressing of food into the spaces between the teeth through the action of a powerful tongue or by buccal and lip pressure when the vestibule is narrow, or the teeth are improperly arranged.

D—Effect of cavity margins, improper inlay or filling margins, orthodontic appliances, or bridges or dentures which impinge upon or irritate the gingivae.

E—Nondetergent diets—accumulation of pasty foods on the teeth.

F—Mouthbreathing—drying of oral mucosa.

III—SYSTEMIC

A—Debilitating diseases such as: tuberculosis, syphilis, leukemia, agranulocytosis, nephritis.

B—Dietary and nutritional deficiencies.

- 1—Acid-base disbalance.
- 2—Mineral deficiencies: Calcium, phosphorus, potassium, iron, etc.
- 3—Vitamin deficiencies.

C—Endocrine disturbances.

D—Allergies and idiosyncrasies manifested in the periodontal tissues.

E—Nervous disorders.

- 1—Sympathicotonia or parasympathicotonia (vago-tonia) may be responsible for disturbance in local blood supply.
- 2—Interference with absorption and assimilation of necessary dietary agents, e.g. minerals, vitamins.
- 3—Neutrophic disturbance, interfering with the nutrition of the periodontal tissues.
- 4—Bruxism (rubbing of teeth together during sleep) and bruxomania (habit of gritting teeth).

"Infection" was not placed on the foregoing list since this is not of primary aetiologic importance. However, once functional disorganization is present, infection easily gains a foothold. Treatments directed primarily at infection, e.g. antiseptics, germicides, vaccines, produce no worthwhile improvement.

On the other hand, the tissues involved in periodontal disease may be foci of infection. The extensive area affected, with its reduced tone making it ideal soil for bacterial proliferation, and the difficulty of cleansing the affected areas, favour the invasion of bacteria and the absorption of their toxins: a condition which must be reckoned with when foci are being sought. In some cities persons who have advanced dental or periodontal disease, are not acceptable as blood donors.

In summary, it cannot be too strongly stressed that a careful study of the factors that may be responsible for the periodontal disease present in an individual case is the surest and most direct approach to a successful treatment.—*From Dentistry, a Digest of Practice.*

•SILICATE CEMENT: AN INVESTIGATION BY A GROUP OF PRACTISING DENTISTS UNDER THE DIRECTION OF THE A.D.A. RESEARCH FELLOWSHIP AT THE NATIONAL BUREAU OF STANDARDS

by GEORGE C. PAFFENBARGER, D.D.S.,
Washington, D.C.

(Summary and Conclusions of Paper in Jour. of the A.D.A.)

1. A co-operating committee of 115 dentists answered a questionnaire and performed a series of fourteen experiments on several trade brands of silicate cements.

2. The average life expectancy of a silicate cement filling was estimated to be about 4½ years.

3. It has been estimated, from the average annual consumption of silicate cement powder by the co-operating dentists, that approximately 11,000,000 silicate cement fillings are placed annually.

This amounts to roughly 190 silicate fillings per year per dentist.

4. The failure of silicate cement restorations can be primarily attributed to high solubility, discolouration, low strength and shrinkage.

5. Opinions of the co-operators as to whether silicate cement is more irritant to the pulp than other filling materials were about equally divided.

6. Silicated cement is not suitable for restorations which must sustain biting or chewing forces. In fact, no dental cement available can be so used.

7. Analysis of the co-operators' mixing techniques revealed a great variance in the powder-liquid ratios employed. This means that great differences exist in the properties of the fillings. The mixes containing the smaller amounts of powder are very inferior.

8. Reducing the quantity of powder in a mix increased the setting time of the cement. Specimens prepared from such mixes also stained more than those prepared from mixes containing a normal amount of powder. The staining was less when the amount of powder used in a mix was more than usual. The advantages of thick mixes indicate therefore that the dentist should use the maximum amount of powder possible for the case at hand.

9. The average time of mixing of the co-operators was slightly more than one minute. When two minutes was used, the time of setting of the resultant mix was, with one exception, increased over the normal setting time. If the cement was mixed for only thirty seconds, the time of setting was reduced or was not affected.

10. The time of setting was usually slightly reduced when the powder was added all at one time instead of in six equal portions at ten second intervals.

11. The water content of the cement liquid is critical. If the liquid was ex-

posed to air overnight and then mixed with the normal amount of powder, the cement would not harden for many hours. In an extremely damp climate, the reverse is true.

12. Increasing the temperature of the mixing slab decreased the time of setting in nearly every case. The cool slab is of great advantage because more powder can be used in the mix.

13. All of the silicate cements were stained by dye solutions. The alkaline-reacting dyes stained the deepest. Mercurochrome is not suitable for use in the so-called mercurochrome test; because it is precipitated by the cement liquids.

14. The opacity of silicate cements varied over a wide range. Some were evidently too opaque, others too translucent to harmonize well with tooth tissues.

15. All of the cements, especially the slow-setting, were severely damaged when exposed to water just prior to the initial time of setting. The surface hardness and translucency of the cements were materially lessened.

16. A silicate cement filling should not be exposed to air during hardening. The surface exposed to air is rougher and slightly softer than the protected surface.

17. The solubility of the slow-setting cements is greater than that of the rapid-setting ones.

18. The acidity of solutions of cements, made by soaking powdered cement in water, was found to vary with the cement. In general, the solutions of the slow-setting cements were more acid.

• DO'S AND DON'T'S IN CHILDREN'S DENTISTRY

DR. JOHN C. BRAUER of Iowa City, Ia., president-elect of the American Society for the Promotion of Dentistry for Children, gives the following rules.

Dr. Brauer's "do's" include:

1. A child should visit the dentist for

the first time when about 3 years of age.

2. Appointments for children should be made in the morning when the child is fresh from a good night's rest. School children, too, should report in the morning.
3. The dentist should win the child's confidence on the first visit.
4. The first treatment should be a painless one, if possible.
5. The child's teeth should be examined carefully in consultation with the parent. The parent should be told in "plain language" just what the care of the child's teeth will entail.
6. Both the child and the parent should be made to understand what a sound set of teeth means to health as well as personal appearance.

In his "don't's" Dr. Brauer lists:

1. Dentists should not encourage unscheduled visits from children on parents' appointment time.
2. A child should not be kept in the dental chair for more than forty-five minutes.
3. Anaesthetics should not be used on a child's first visit unless absolutely necessary.

—N.Y. Jour. of Dent.

•NITROUS OXIDE

IF nitrous oxide is given with sufficient oxygen, it can be given safely for any length of time and to patients of any age. It was formerly believed that its use was unsafe in the case of children. Any ill effects following its use in this class of

patients are due to the fact that children are more susceptible to anoxemia than adults. If anoxemia is avoided, this objection disappears.—*Frank J. Murphy, M.D., Detroit, Mich.; per Digest of Practice, Oct., 1940.*

•THE UTILIZATION OF THE CALCIUM OF DI-CALCIUM PHOSPHATE IN CHILDREN

by ELIZABETH KEMPSTER, HERTA BREITER, ROSALIND MILLS, BEULA McKAY, MARIE BERNDT and JULIA outhouse, Urbana, Ill.

(Condensed from the Journal of Nutrition, in Dentistry a Digest of Practice.)

A STUDY has been made to determine quantitatively the availability for growth purposes of the calcium in di-calcium phosphate.

Recent studies have yielded data which show clearly that man is remarkably uneconomical in his utilization of milk calcium. Because of this wastage the question arises whether or not pure calcium salts, which are frequently recommended as a supplement to the diet, are better than milk in this respect. If the calcium of di-calcium phosphate were unusually well utilized, this inorganic compound would be a valuable adjunct to human dietaries in view of its relatively high calcium and phosphorus content, its palatability and its low cost.

It may be concluded, however, that di-calcium phosphate is not superior to milk as a source of calcium for children and that, except for the person who is allergic to milk, there is little virtue in recommending the replacement of milk in the diet by di-calcium phosphate.

Dental and medical literature contains many references to the small or large size of teeth in particular endocrine disturbances. These statements are not based on fact but have gained unjustified acceptance merely because of continued repetition. The form and size of the tooth is acquired at the stage of tissue-differentiation, which in most teeth occurs before the first year of life. Most of the endocrine dysfunctions start after this period. A severe prenatal or neonatal disturbance would be necessary to produce an appreciable effect upon the size of the crowns.—*Isaac Schour, D.D.S., Ph.D., in Dentistry a Digest of Practice.*

• **HARVARD ANTHROPOLOGIST**

(Condensed from the Bul. of the Chicago D. Soc.)

ERNEST A. HOOTON, anthropologist and author of Harvard University, speaking before the Cleveland meeting of the A.D.A., hit at the "attitude of medical science which has tended to thrust the dentist into the position of a person practising a mechanical trade rather than a scientific profession." He said that he "should like to see this association, on its own initiative, establish an institute of research in human biology which would correlate the phenomena of growth, nutrition, psychology, anatomy and environmental status with the problems of dental and general pathology.

"Such a project would enlist the cooperation of psychologists, geneticists, anthropologists and a host of unregimented medical scientists and would lay a foundation for a more spacious science of both dentistry and of general medicine."

Asking himself, during the course of the lecture, whether dentistry should be absorbed by medicine, Dr. Hooton answered: "Such a transference would be tantamount to offering another batch of targets to a marksman who is already blazing away as fast as he can at innumerable enemies, hitting some but missing others."

"I am afraid," he said, "that the beam in the eye of medical science is not that of radiance, but is rather of the variety which ought to be removed before medicine attempts to take the mote out of the eye of dentistry.

"It would be folly," he said in what many considered to be a pointed remark on the new Harvard plan of dental education, "to abandon the training of thousands of dental surgeons needed to combat pathologies which affect virtually 100 per cent of the civilized population, merely because we feel that the basic causes of caries and so forth are medical and

biological. Dentists must not sit still and let our dentitions rot while waiting for the biological millennium. They have to keep plugging away."

• **HEALTH HAZARDS IN ACETANILIDE—CONTAINING NOSTRUMS AND MIXTURES**

by PAUL J. HANZLIK, M.D.

(An article prepared by Dr. Hanzlik as one in the series of articles on pharmacology and therapeutics arranged for by the council on Dental Therapeutics of the American Dental Association).

THIS paper consists of an exhaustive review of the literature, together with a critical analysis of the available data on the pharmacologic actions of acetanilide. The author's findings were summarized as follows:

1. Acetanilide is one of the most widely exploited coal-tar derivatives in hundreds of nostrums and proprietary mixtures of secret and variable composition, although many of these products are known to contain other potent drugs.

2. Medication with these products is commonly repeated or continued for long periods without diagnosis or medical supervision, so that the problem of indiscriminate medication and possible health hazards is one of chronic intoxication rather than acute poisoning, and has important bearings on individual and public health.

3. The constituents of acetanilide-containing nostrums and mixtures may conceivably modify the actions of acetanilide by potentiation, addition, synergism or antagonism, but these possibilities have never been properly investigated, and yet modifications of the actions may determine peculiar reactions, sensitivities and hazards to health.

4. Undesired results from the continued use of acetanilide and acetanilide-containing nostrums and mixtures, which have been reported for human beings, consist of the following: addiction and abstinence symptoms; headaches, gastrointest-

inal disorders, anorexia, emaciation, muscular weakness, skin rashes, anoxemia, anaemia, cyanosis, circulatory depression, visceral degeneration and increased susceptibility to intercurrent disease. A vicious circle tends to be established with aggravation of the symptoms originally treated with acetanilide.

5. The early blood changes in human beings are characterized by pigment changes, such as methemoglobin or sulf-hemoglobin, or both, with reduction in oxygen capacity, dark oxidation products from acetanilide, hemolysis and blood destruction. The character of the dietary and sometimes other medication, especially with products containing sulphur, the use of cathartics, the state of the alimentary tract, the presence of asphyxial products and hyperglycemia and hypoglycemia are conditions, among others, little understood and which may affect haemoglobin changes, either promoting or preventing their occurrence.

6. Experimentally, the cyanosis, anaemia, haemoglobin changes and blood destruction observed in humans have been reproduced in susceptible animals, but unfortunately most recent investigations have been made with non-susceptible animals (rodents) or with inadequate criteria, with negative results, and therefore are misleading and unacceptable.

7. Claims concerning the possible toxicity of acetanilide for man based on fatal and tolerated doses of the drug in animals are misleading and unwarranted, especially when acetanilide is mixed with other drugs, since the effective and toxic doses in man appear to be much smaller than those for several species of animals.

8. Since many conditions requiring relief from pain or discomfort are more rationally and properly treated by non-medicinal measures, and the nature of acetanilide analgesia is not understood, the frequent, continuous or indiscriminate use of acetanilide and acetanilide-con-

taining nostrums and mixtures is unwise, irrational, hazardous to health and unwarranted. [*J.A.D.A.* 27:1505 (*Sept.*); 27:1672 (*Oct.*); 27:1833 (*Nov.*)].

• RESULTS OF MODERN DIET

MODERN American inability to resist disease of the gums reflects a mode of living, with special regard to eating habits, in sharp contrast to that of more primitive—and dentally sturdy—peoples, Dr. Harold J. Leonard of the Columbia University school of dental and oral surgery, declared at the centennial convention of the American Dental Association in Cleveland.

"Reasons for the difference are based primarily, in America, on insufficient chewing function from early infancy up and general dietary lacks."

"Even young infants are deprived of the development function of nursing," he said, "by getting their food from a soft rubber nipples bottle. After the nursing period, they get cooked cereal and strained vegetables and never thereafter have to use their teeth and jaws as nature intended."

The result of this, Dr. Leonard added, is underdeveloped jaws, crowded and irregular teeth, with not enough function to maintain a vigorous blood supply to the gums, so that they are easily invaded and quickly break down when infection sets in.

The particular lack in the modern American diet, he stated, is that of grit or any abrasive substance which in primitive peoples wears their teeth into more efficient and healthy shape.

"The lack of grit in the modern diet," he concluded, "and the insufficiency of masticatory function do not permit the teeth to wear down to an end-to-end bite in front, or to wear off the interfering cusps and corners which are present, especially if the teeth are crowded and irregular."—*A. D. A. Release.*

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J. S. Bricker, Vancouver

Letters to the Editor

Love of one's profession should be like the ideal love of man for woman. It becomes great and well worthwhile just to the extent that it is governed by service and sacrifice. For some time far too many, when confronted with the problem of building up a strong national dental organization, have said, "What's the use," and have proceeded indifferently on their way. Pertinent questions concerning our profession have arisen and are continually arising which require the enthusiastic support of all dentists. The editorial policy of this Journal has been, not to artfully dodge these issues, but to direct the thinking of our members along lines essential to the growth and development of our cause, even at the risk of criticism.

In the October issue of the Journal there appeared an editorial entitled, "Where Do We Stand?" pointing out some of the greatest problems facing our Canadian profession. As might be expected men reacted very differently to this treatise, resulting in a number of letters being written to the editor.

One man in an eastern Ontario city wrote with a defeatist attitude stating that in these difficult times we should not concern ourselves with increasing

our expenses. On the other hand a dentist in a western Ontario city wrote that he was going to do something which had been on his mind for some time; that is, increase his fee to ten dollars annually instead of paying just five dollars. In other words he would pay his required five dollar fee to the provincial board and he would also pay five dollars annually to the Canadian Dental Association whether anyone else did so or not. He enclosed his cheque for this amount. Would that we had more such fine, high-minded men in our profession, men with a vision, men who are prepared to do something, and do it at once; men who are ready to draw their sword and throw away the scabbard, lest in a moment of indecision they be tempted to sheath it. All honour to such fine-spirited leaders.

In response to this editorial a letter came also from a friend of national dentistry serving with His Majesty's forces overseas, Captain Edward T. Bourke, of Montreal, and a former honoured delegate to the Canadian Dental Association. I am sure that Captain Bourke will permit me to quote a few excerpts from his most inspiring letter written from "Somewhere in England," in the interests of our cause. Captain Bourke says, "We are going through serious days; something is happening in this old world of ours, so let's wake up and be fully alive to our responsibilities as dentists. Some terrible things have happened this past year and perhaps we can take a lesson from these happenings and realize just what a smug complacency and short-sighted policy can bring in its wake."

"If any Board can truly say in one breath that it recognizes the need for a strong national organization and then is not prepared to bend itself a bit backwards in an endeavour to fulfil that need there is something wrong somewhere. To my way of thinking if the provincial boards are not able to put over a national organization that's a real one, then someone higher up is very liable to step in and take over the whole show. This same thing may happen in other fields as well as ours so let's try to be alive to what's going on in the world and above all, let us love dentistry for dentistry's sake."

"This war is doing things to us. I'm forced to smile just a little at your pleading. You ask the question, 'Are we prepared to make any sacrifice to attain our ideals?' I ask the question, 'Is the sum of five dollars a year to help establish better dentistry to be considered a sacrifice?' It sounds almost like mockery to me. You see, I have the right to ask that question, because along with scores of other dentists I have seen fit to serve the profession and at a loss of perhaps a little more than five dollars a year. These men of our profession were not exactly the down-and-outs and derelicts. Did we quibble when we signed up as to whether we would get our money's worth? I think not; we were game to serve. The cause was just and there was no time for quibbling."

"This whole business is not nice; it's not easy, but it has to be apparently, if any of the things we hold dear are to survive. Life is sweet; one fully realizes that when you think in terms of the possibility of it being snatched

from you at any moment. But even that gamble is mighty worthwhile if only it can be a better world for those who follow afterwards. Even the gamble of a five dollar bill every year to the C.D.A. might prove worthwhile to every Canadian dentist if a better dentistry follows."

"Dentistry has a big job to do. It is going to have a bigger one when peace finally comes. These are days for calling a spade a spade. Keep telling dentistry to get well prepared for the future. We've seen enough of the results of unpreparedness in other fields. We've seen leaders toppled over. We don't want it to happen to us — it needn't."

No, it needn't and we do want to thank Captain Bourke for sending us this inspiring message from "Somewhere in England" at this critical time in the life of our Canadian dental profession.

Since the October editorial was written some progress has been made towards our present goal of a four dollar membership fee. To date Nova Scotia, New Brunswick, Manitoba, Saskatchewan and Alberta have agreed to this increase. Quebec is hard at work on the Problem. In Ontario, at the time of writing, about fifteen dental societies have had this fee proposition placed before them and the reception has been favourable. More than half of these passed resolutions favouring greater support to the C.D.A. The writer feels confident that as soon as the dentists of British Columbia have dealt with their unusual legal problems that this energetic and loyal group of men can be counted upon to support national dentistry to the fullest extent.

Time has become an essential feature of this whole problem. Captain Bourke has pointed out what "a smug complacency and short-sighted policy can bring in its wake." As he says, things are happening in this old world of ours and it is time that we were fully alive to our responsibilities. Our tardiness in dealing with this important matter would indicate that perhaps we have not fully appreciated what sacrifices our brothers, serving overseas, are making on our behalf and how important it is that we should face squarely all the problems which are submitted to us. The cream of the Canadian dental profession is to be found in the Dental Corps and we are justly proud of their achievements.

Again, in a recent letter from "Somewhere in England" Captain S. Cripps, also of Montreal, writes that he is seeing from twenty to twenty-five patients a day and still trying to keep up his academic standards, as well as trying to educate the ignorant and plan for a greater emphasis to be placed on preventive measures and the treatment of periodontal lesions. Such high ideals can only redound to the glory of the dental profession.

If we do not already love our profession let us try to build up some affection for it. Let us try to do something in our day and generation and not be satisfied with an emaciated organization to which we are prepared to give only lip-allegiance.

The Nazis are out for world domination and under a system too horrible

to contemplate — but such an ambition cannot be realized for that honour has not been reserved for Hitler. We Canadians stand foursquare with the other members of our great Empire in that we would sooner die standing up than live on our knees. God will crown the British arms with victory in due time but when that day comes we will be faced with problems more difficult to solve than those confronting us at the present time. Conditions of the past can not return. Now is the time to organize and prepare and with the greatest efficiency possible. Can we not rise up and with one accord say, "It shall be done."

CORRECTION

The last paragraph of the editorial entitled, "The Enemy of the Good" which appeared in the January Journal should have been in quotation marks, a typographical error.

BOOK REVIEW

Credit and Collection Psychology for Professional Men, by Harris Gruman, Practising Optometrist of Lebanon, Pa. B. S. in Economics, Wharton School of Finance and Commerce, University of Pennsylvania. O. D., Penn. College of Optics and Ophthalmology. D.O.S., Scientific Section, Beta Sigma Kappa Honorary Fraternity. Published by the Telegraph Press, Cameron and Kelker Streets, Harrisburg, Pa., 1940. Price \$5.50.

The reviewer has read this book with much interest. It has been written to increase one's practice by utilizing the principles of applied psychology for the extension of credit. The author claims that 98.4% of outstanding accounts can be collected by the methods outlined.

If the average dentist is to be successful he must extend liberal credit and invariably this procedure leads to many difficult problems. Many men can write collection letters which will bring in returns but it requires very careful study to be able to write such letters in a way so as not to create resentment or animosity.

The reviewer believes that there are certain suggestions; such as, the printed and signed contract and the formation of a Collection Agency within one's own household, etc., which are not applicable to the practice of dentistry in Canada. However, there is no doubt that Dr. Gruman has included in this book many suggestions which can be applied to the average practice with great benefit. This book is well worth while the perusal of the members of the dental profession.—*M. H. G.*

CORRESPONDENCE

British Dental Journal,
Temporary Address, 5 Westleigh Rd.,
Barton Seagrave, Kettering, Eng.,
November 26, 1940.

To the Editor, Journal of the C.D.A.:

You will have gathered from the Journal that our Headquarters in Hill Street has received some attention from the enemy. The top floor was more or less completely burnt out by an incendiary bomb and the whole of the

rest of the building was soaked with the water used to put out the fire. However, the staff rose nobly to the occasion and cleared up the mess and mopped up the water and, in a very few days, work was proceeding very much as usual although the whole building still feels damp and cold. This, although it seemed at the time pretty serious, was not quite so serious for us as the bombing of their surgeries has been for some of our members, numbers of

Correspondence

whom have had the whole of their surgeries and equipment rendered completely useless. For such of them as desired to carry on in the same neighbourhood we have generally been able to fix up some temporary accommodation in other men's surgeries and, in London especially, the wrecking of the surgeries is only, in a sense, the last straw as the practice had gone before the surgery went. Some of these men are very bravely trying to keep their practices together by having a temporary surgery somewhere in the country within reach of some of their patients. Others of military age are, of course, going into the Services and those over military age are taking temporary appointments either in the School Dental Service or taking the place of younger men who have been called up.

The whole thing is part of the problem created by what is, in effect, a wholesale redistribution of the population and the real difficulty is that the redistribution is spasmodic and does not follow any regular plan and therefore the redistribution of dentists (for that is what it amounts to) can only be extemporized from time to time to meet a situation as it develops.

However, the Central Bureau which we have set up in Hill Street is gradually getting things sorted out and on the whole, I think, with a very considerable degree of success. The numbers of dentists who have volunteered for service with the Forces has been, up to a short time ago, sufficient to meet the immediate call, but we have now reached the stage when compulsory powers have got to be used and up and down the country men are being selected to go on Service. This, of course, entails a very careful selection of the needs of the civilian population, the hospitals and the schools, both dental and general, a work, as you may well imagine, of some considerable complexity. The machinery, however, seems to be working fairly smoothly and although some individual hardship is unavoidable the scheme is, I think, working fairly between district and district and the individual dentists in each district.

Everybody is anxious to do all they can to help. Of this support we have had some splendid examples since men's surgeries have been bombed — other men coming forward within an hour or so of hearing the news with offers of accommodation and help of every sort

and you may take it from me that Hitler, Goering and Co. are not going to get us down by bombing our cities no matter how hard they may try.

Please remember me kindly to all our friends in Canada.

(Signed) BRYAN J. WOOD,
Editor, British Dental Journal.

No. 1 Neurological Hospital,
R.C.A.M.C., C.A.S.F.,
November 21, 1940.

To the Editor, Journal of the C.D.A.:

I am grateful for the copies of the Journal which you continue to send me and assure you that in addition to the valuable technical material which, in common with the peace time volumes it still provides, it is now of vital interest to many of us overseas whose future is so wrapped up in the destiny of the Canadian Dental Corps at home and since it is practically our only source of news of Corps activities it has become doubly welcome.

The "Problems in Practice" section of the October issue deals with the problem of a Nova Scotia confrère who seeks help for a patient suffering from a distressing and apparently baffling condition. The symptoms and case review are of particular interest to me as they so truly parallel those which are periodically encountered in patients in the Montreal Neurological Institute. The work of Costen, Goodfriend, Prentiss and so many others led us to consider seriously the possibility of the tissues in the temporo mandibular joint as a trouble source. The more cases handled from this viewpoint the more convincing become the statements of these writers. For this reason and because the treatment lies solely in the hands of the dentist I venture to add a suggestion.

I am impressed by the following three points which I consider compels one to suspect the joint tissues.

1. This patient, like most sufferers in this classification, is edentulous.
2. There is an absence of clinical manifestations of pathology and trauma.
3. The pain and burning sensation follows the use of food, liquid diet causing a minimum of discomfort.

Point one suggests that the normal support

of the natural teeth, particularly the posteriors, may be missing, permitting the condyle head to traumatize the tissue in the joint region.

Point two indicates that the source of the discomfort is distant from the point of sensitivity.

Point three inclines one to the belief that movement of the jaws brings on the symptoms.

The treatment is simple and comprises the establishment of a normal bite plane and the balancing of the occlusion. The mounting with face bow on an anatomical articulator of the patient's present dentures will be a great aid. Frequently it will be found that in jaw movement the occlusion is almost limited to the anterior teeth. In these cases a heavy bite on the new dentures in the molar

region is indicated and the operator will note with interest the ease with which the patient gradually brings the anteriors into occlusion. This indicates that the condyle head is being slightly withdrawn from its previous position of crowding.

I would like to be able to quote specifically the references where authoritative information on this syndrome is available but a good part of the small reference library with which I left Canada has, along with certain instruments and bits of equipment of my own, disappeared on the way. However, much has been said recently in the literature and I feel confident it will be an easy matter to dig it up.

(Signed) CAPTAIN VICTOR JEKILL.

EMPIRE NEWS

GREAT BRITAIN:

Luftwaffe Over the "London"

On one day at the beginning of the raids there was an impression in the Hospital that the whole of the German Luftwaffe had concentrated generally on the East End of London, and on the Hospital in particular.

Before dinner was comfortably over, a bomb fell by the east gates, to shatter three-quarters of the windows in front of the Hospital. Almost immediately, however, another bomb fell on the Alexandra Nurses' Home, causing some considerable damage, but no casualties. An hour later the Luckes Home, with 150 nurses sheltering in its basement, received a direct hit. Again, miraculously, there were no casualties. Later that night the Laundry was put out of action by yet another bomb, but after travelling from there to two other laundries, which were equally demolished in their turn, the linen returned. During the same night a deep crater appeared outside the Students' Hostel as a result of another heavy calibre high explosive bomb, but hardly a window was broken. Fortunately on that afternoon 110 patients had been discharged to their homes, and on the following day 125 more and 80 nurses were evacuated, to complete a temporary but almost complete evacuation of the Hospital, which became a Casualty Hospital of 200 beds, with a further 100 for acute "normal" emergencies. The Private

Wards closed, the Resident Staff was reduced, and the decks were generally cleared for a nightly repetition of that first experience.

In due course a further high explosive fell in the area between the School of Physical Medicine and the Out-patient Department, causing considerable damage to the west end of the Out-patients and the basement of the School. In the Tyrnauer Baths Department the First-Aid Post had been established, though at the time, under the aegis of their President, they were refreshing themselves in comparative security with a communal reading of Shakespeare's "Midsummer Night's Dream."

After a few more days of immunity four incendiary bombs were scattered on the Hospital; two were spotted and disposed of, one burnt itself harmlessly out on the roof of the Private Wards—a most un-Nazi gesture of impotence against the "Capitalist Class"—and the fourth penetrated, unseen, the tiles of Luckes Home and set the roof ablaze. The Fire Party promptly prevented it from spreading.

Apart from a dive attack one afternoon, when six bombs were dropped in the district without warning, casualties treated have been surprisingly few. On that occasion 20 badly injured people were admitted and 79 treated in the First-Aid Post.

The morale of the local population has been extremely high, though the destruction of property has been widespread in its sense-

less indiscrimination. 120 houses of the Hospital Estate have been rendered uninhabitable and some 40 employees of the Hospital have already lost their homes.

During the whole of this time the bearing of the Nursing Staff on duty has been an inspiration to everyone, for many of them in the Wards at night have been more conscious of the dropping of bombs and shrapnel than in any other part of the Hospital—with the obvious exception of the roof-watchers, who have shown a magnificent spirit, and four times saved the outbreak of fire from incendiary bombs by their prompt action.

The Medical Staff, too, have shown their usual efficiency and good humour under very trying circumstances, and the conduct of the Lay Staff has been exemplary.—*London Hospital Gazette*, Nov., 1940.

Glass in the Surgery

The risks of injury from glass splinters, to which both patients and operators are exposed in operating theatres and dental surgeries are so obvious that dental surgeons are protecting their patients by treating the windows of their surgeries with some anti-splinter device. Non-splinter glass is also being placed in operating lamps.

SOUTH AFRICA:

Evacuee Children

A large number of evacuee children have now arrived in South Africa from Great Britain and the various Branches of the Dental Association of South Africa have been circularized regarding the giving of dental treat-

ment to these young people.

The children who have recently arrived in South Africa have been distributed throughout the Union, each contingent being accompanied by Red Cross V.A.D. members and trained nurses.

We are glad to know that with regard to dental treatment for these children, many members of the dental profession have already expressed the desire to provide whatever treatment may be necessary without charge. From all parts of the Union this expression has come, and we understand that in some of the cities and towns, dental panels are in course of formation to render gratuitous service.—*S. African D. Jrl*, Nov., 1940.

Farmer Donates a Mobile Dental Unit

"A magnificent donation of a 'Travelling Dental Surgery' for dental service with the Forces, has been given to the South African troops by Mr. Archie Luckhoff, of Zuurplaats, Graaff Reinet.

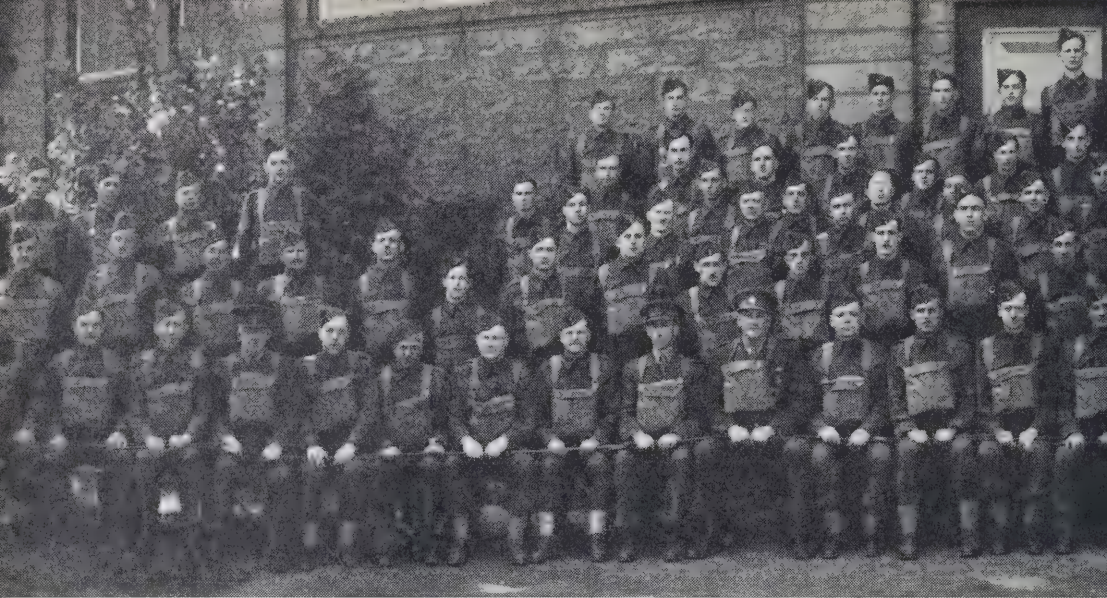
This unit, presented to the Director-General of Medical Services, will travel to all military camps where there is no established dental clinic.

This fully equipped dental surgery makes dental attention possible in all inaccessible outposts where the services of the unit will be invaluable. It will also, where necessary, be used as a nucleus and distributing centre for outposts.

The dental surgery is being designed, made and equipped by specially qualified men, and is being fitted with all necessary apparatus, including x-ray."—*S. African D. Jrl*, Nov., 1940.

"The capacity to make friends with life and to enjoy life does not depend so much on our material possessions as on our interior resources. If we tackle our present difficulties with these resources we shall discover ourselves and gain confidence to face the problems of the future. We must grow up, calmly and trustfully, not rushing forward to meet difficulties, but accepting them and overcoming them as they present themselves, living a day at a time."—John Kennedy. M.A., in the "Psychologist".

Every bit of useless worry—and all worry is useless—every bit of anxiety, every bit of despondency, melancholy or foreboding, every bit of fear—fear of failure, of losses, of sickness, of disease, of death, or of the unfavourable opinions of others—all these things are vitality-sappers. One is wasting life force every time one talks of failure, of hard luck, of troubles and trials, of past errors and mistakes.—O. S. Marden in "The Optimistic Life."



A COMPOSITE DENTAL UNIT THAT

DENTAL CORPS NEWS

M.D. No. 2, Headquarters, Toronto LADIES' AUXILIARY

The officers and men of the C.D.C. for M.D. No. 2 now serving overseas, 70 in all, were sent a gift box at Christmas. All boxes arrived safely. To the members of the Corps serving in Canada, 96 of the army division and 62 of the air division, gift packages were sent also from the Ladies' Auxiliary.

Mrs. George Grieve convened a committee, under the Citizens Committee for troops in training, which provided a Christmas tree and party at Fort York Armouries for children of the troops quartered in Toronto. More than 1,500 children and adults attended and 30 members of the Auxiliary assisted.

The ladies of the Auxiliary meet each Thursday to sew for the Dental Corps and child refugees. Already six dozen pyjamas have been sent overseas.

At a luncheon party of the Auxiliary on January 16 at Park Plaza, Lt.-Col. Harvey Bean was guest speaker of the meeting. Lt.-Col. Bean is D.D.O. for M.D. No. 2, C.D.C.

Bridge, February 20

The ladies of the Auxiliary are holding a benefit bridge at Sherbourne House on February 20, proceeds to be used in their work.

M.D. No. 3, Headquarters, Kingston, Ont.

The following is a list of dental surgeons who have been appointed recently to No. 3 Company, C.D.C., effective dates shown opposite their names:—

Dr. D. M. Rouse, Bancroft, Ont., November 11, 1940.

Dr. M. L. Pratt, Manotick, Ont., October 21, 1940.

Dr. W. D. Grant, Ottawa, Ont., November 8, 1940.

Dr. H. M. Jolley, Toronto, Ont., November 11, 1940.

M.D. No. 4, Headquarters, Montreal

CHRISTMAS TREE FOR DENTAL GROUP

The Montreal Women's Auxiliary of the Canadian Dental Corps arranged for a Christmas tree for the families of the men at the Drummond Medical Building on the afternoon of December 21. Mrs. J. P. Lantier was in charge of all arrangements and was assisted by Mrs. K. C. Berwick who was tea convener and Mrs. L. E. Kent who looked after the decorations.

Following the entertainment for the children and after the distribution of gifts from the tree refreshments were served.—*Montreal Star*.



PROCEEDED OVERSEAS SOME TIME AGO

M.D. No. 6, Headquarters, Halifax

The appointment to a commission in No. 6 Coy C.D.C. with rank of Lieutenant, of Daniel Laughlin McDonald, is announced at headquarters pending final approval and publication in the Canada Gazette.

M.D. No. 10, Headquarters, Winnipeg PROMOTIONS

Among the promotions recently authorized from Lieutenant to Captain are: O. Brewer,

K. I. Levinson, C. R. Oke, J. B. Rumberg, A. H. Bernstein, M. Wachnow, J. R. Fowle and J. M. Grahame.

At the military bowling league December 19, special prizes were offered. The C.D.C. team was high without handicap (no prize), second high with handicap (\$10.00 cash) and Q.M.S. Tevendale ran off with individual high (\$2.00). The C.D.C. team is tied with two others for top place.

NEWS FROM THE PROVINCES

ALBERTA:

Edmonton Dental Society

The Edmonton Dental Society held its regular January meeting at the Macdonald Hotel on Tuesday, the 7th. Among other business was some discussion of the Western Canada meeting which will be held in Edmonton, beginning on the first Monday in June.

SASKATCHEWAN:

Annual Report of the Council of the College of Dental Surgeons

The annual report of the Council of the College of Dental Surgeons of Saskatchewan contains a number of interesting items. The financial statement shows a very satisfactory

condition indeed. Considerable credit must be given the Councils of earlier years that built up a reserve and invested in Government Bonds, the interest on which has assisted the Council to reduce the annual fees by forty per cent during the depression and drouth years in Saskatchewan.

The Council, recognizing the importance of having a strong, active Canadian Dental organization, has agreed to pay, annually, to the Canadian Dental Association, four dollars per member when the official organizations of all the other provinces do likewise.

The Council went on record as favouring the appointment of a paid official by the Canadian Dental Association just as soon as finances would permit. Such an official could

maintain continuity in all the policies and undertakings of the Association, and between meetings of the Executive or the less frequent meetings of the Association, and could represent it in all matters affecting Canadian dentistry.

Saskatchewan has contributed twenty-seven dentists to His Majesty's forces, most of them being in the Dental Corps, which represents nearly twelve per cent of those on the Annual Register. The Council is paying the annual license fee of those enlisted and is paying the annual fee to the Canadian Dental Association on their behalf, so they may enjoy the privileges of membership in the National Association and receive the official Journal, as formerly.

MANITOBA:

Dental Nurses and Assistants

The Winnipeg Dental Nurses and Assistants Association held its regular monthly meeting in the Oak Room of the St. Regis Hotel on January 6.

Following the dinner, Miss L. Veal read two papers given at the Ontario Convention last year. The first was "Truth Can Never Be Conquered", by Colonel G. O. Fallis, padre in the last World War. The second was "Practical Suggestions", by Dr. M. H. Garvin, of Winnipeg.

At the conclusion of the business meeting, presided over by Miss Juel Grose, nurses and assistants adjourned to Birks-Dingwall's store where we were cordially greeted by Miss A. Holloway who gave us a very interesting and instructive talk on "Correct Table Setting".

A. SCOTT, *Ed. Sec.*

ONTARIO:

Dental Services for the Royal Norwegian Army and Navy Air Forces

At the foot of Bathurst Street in Toronto is a Military Camp known as "Little Norway". Here are stationed about 600 members of the Royal Norwegian Army and Navy Air Forces who have escaped from Norway and made their way to England and hence to Canada. In October Dean Mason was approached by the head of the Medical Services for these men regarding the possibility of the Faculty

of Dentistry undertaking the care of their teeth because they have no Dental Officer attached to their Unit. On November 1 the first group was examined and dental services for them were commenced.

At the first appointment they are given a prophylaxis, a full mouth radiographic survey and a preliminary examination is made. Restorations are limited to plastic fillings. Up to the present time those who have received services have been only the pilots in the camp and any who required emergency treatment.

The preliminary observations made from the examination of these men reveal several interesting facts. The restorations observed in the mouth are almost entirely amalgam. Even in the case of a molar broken down so badly that the entire crown has been restored, amalgam has been used. Generally speaking these amalgam crowns and large amalgam fillings are excellent both from the standpoint of strength and restoration of anatomy.

Conservative dentistry seems to have been carried to the extreme in the mouths of many of these men for we find practically every man with non-vital teeth and some with as many as seven. The results of the root canal therapy, however, unlike the amalgam restorations are surprisingly bad. A high percentage of these non-vital teeth now present apical trouble. From the incompleteness of the root canal fillings observed in these teeth it would appear that either pulpotomy is practised extensively in Norway or a form of mummification.—R. G. ELLIS, *Faculty of Dentistry, University of Toronto.*

Honoured by Electorates in Ontario

Dr. Fred. J. Conboy, mayor of Toronto.

Dr. H. A. Ross, alderman, City of Toronto.

Dr. G. J. Millen, re-elected alderman, City of Toronto.

Dr. Alex. A. Stewart, re-elected Board of Education, Toronto.

Dr. F. M. Deans, mayor of Oakville.

Dr. W. S. McKay, re-elected mayor of Galt.

Dr. J. A. Phillips, elected mayor of Cornwall.

Dr. H. A. Stewart, re-elected mayor of Kingston.

Dr. D. D. McIntosh, elected mayor of Alexandria.

News from the Provinces

Dr. W. H. Gifford, elected alderman of Oshawa.

Dr. W. F. Bradley, elected councillor of Parry Sound.

It would seem this is only a partial list of Ontario dentists giving public service in municipalities in which they live. The above names were taken from the press and any omissions will be gladly corrected if your editor is advised.

Dental Nurses and Assistants

TORONTO CHAPTER—The regular monthly meeting of the Toronto dental assistants was held at the Royal York Hotel on January 6. It is the practice of this chapter to have the Vice-president preside at one meeting during the season, so Miss Mildred Brown was in the chair. Reports of the Christmas work done by the group were read, together with a letter from the family cared for, expressing great appreciation.

Arrangements for the Annual Banquet of the Chapter were reported well in hand. The Banquet will take the place of the February meeting.

After the business meeting the evening was given over to a Round Table discussion on the different phases of the dental assistant's work, and many useful suggestions were brought out.

CATHERINE SIMPSON, *Secretary*.

NIAGARA DISTRICT CHAPTER—The dental nurses and assistants of this Chapter held a very enjoyable meeting on January 6 at the home of Madeline Coombs, St. Catharines. Iverna Rae, of Hamilton, was a guest of the evening. Miss Kay Mason, Vice-president, took charge of the meeting in the absence of the President, who was ill.

It was moved by Evelyn Rogers and seconded by Gertrude Doyle that the group go to Hamilton next month for the meeting, where Miss Rae has kindly offered to demonstrate the laboratory method of waxing and processing acrylics. The speaker of the evening, Mr. Lenlocks, demonstrated the cleaning and lubricating of the handpiece. He brought along, too, some old types of handpieces dating back to 1896 and pointed out the many improvements.

GERTRUDE DOYLE, *Sec.-Treas.*

SARNIA CHAPTER—The Sarnia members held a meeting on December 5 in the office of Dr. E. A. Storey. The President, Marjorie Crees, presided. During the business session some of the Chapter's funds on hand were apportioned to the war fund. A discussion on posters and table clinics for the coming Convention also came up for consideration. At the close of the meeting the members were invited to a Christmas party at the home of the President on December 12.

E. LE VAIRE STORING, *Secretary*.

LONDON CHAPTER—The members of this Chapter were guests at the home of Miss Jane Wells for their December meeting, which took the form of a hard-times party. Games and contests were greatly enjoyed. Those winning prizes were Loretta McCaughey, Jane Wells, Helen Huyck, Winnifred Matheson, Madeline McKay and Isabel Scott. Refreshments were served at the close of the meeting.

EILEEN GREEN, *Secretary*.

Essex County Dental Association

At a meeting of the Essex County Dental Association on November 21st, 1940, it was moved by Dr. L. D. Hogan, seconded by Dr. R. G. McMillan and carried that "Whereas many of our profession have joined and are joining the King's colours and therefore not paying the annual fees and whereas an increased income is required to more adequately support the Canadian Dental Association, public dental health education, extra-mural services, etc., and whereas we feel that our cash reserve now invested in government and other bonds should remain intact, therefore, we, the members of the Essex County Dental Association, in regular meeting assembled, go on record as being in favour of the proposed change in the by-laws of the Board of Directors of the Royal College of Dental Surgeons whereby the annual licentiate fee be increased from \$5.00 to \$10.00 and further that a copy of this resolution be forwarded to the secretary of the Board."

It is further resolved on motion of Drs. Furlong and McIntyre that the above resolution be published in the Journal of the Canadian Dental Association.

**Royal College of Dental Surgeons of
Ontario**

A special meeting of the Board of Directors of the Royal College of Dental Surgeons was held on January 13th, 1941.

After the business of the meeting had been concluded, Dean Mason, on behalf of the Board, presented an illuminated address to the retiring President, Dr. L. D. Hogan, which read as follows:

**RESOLUTION OF APPRECIATION
to
LEONARD DOUGLAS HOGAN, L.D.S.,
D.D.S.**

In recognition of the valuable services you have rendered the profession of Dentistry, this Board of Directors desires to express appreciation.

During your eight years as a member of the Board, two of which serving as President, you have given faithful attention to all matters pertaining to the office you held. Your advice has been helpful to the profession of which you are a member and at all times you have made every effort to serve the best interests of Dentistry.

We, your fellow members of the Board of Directors of the Royal College of Dental Surgeons, recognize your contribution to Dentistry, realize the sacrifices you have made to this end, and desire to express our admiration of all those qualities you have so ably portrayed.

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December 19th, 1940.

Dr. Hogan made suitable reply, expressing appreciation of the co-operation and happy associations experienced while a member of the Board.

QUEBEC:

**Annual Meeting of Montreal Dental
Club**

The Annual Dinner Meeting of the Montreal Dental Club was held on Dec. 9, 1940, at the Montreal Badminton and Squash Club. Some seventy members were present.

Officers elected were as follows: Honorary President, Capt. L. E. Kent, C. D. C.; President, Dr. J. K. Carver; Vice-president, and President-elect for 1942, Dr. A. D. Angus; Secretary, Dr. A. D. Richardson; Treasurer, Dr. R. B. Bell; Members of the Executive, Drs. A. Voisard, W. Phelps, E. S. Robinson, G. Leahy, A. W. Mitchell, and H. C. Macnabb.

Captain Kent, the outgoing president, in a review of the year's activities, said that of an active membership of 117, 25 were on active service and eight were already in England.

Major H. V. Driver, D.D.O.M.D. No. 4, owing to illness, was not able to be present, but he sent a personal appeal to the members of the Club stating that there would be an early need of duty-conscious dentists and personnel for the Canadian Army Dental Corps.

The meeting closed with a Toast proposed by Capt. Lorne McRae to those serving in the C. D. C. overseas. They are as follows: Majors F. W. Saunders, Donald MacCrae and J. W. Gerrie. Captains H. R. Cleveland, F. A. Edward, E. T. Bourke, V. H. T. Jekill and J. A. Kerr.

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**Dental Nurses and Assistants
Association**

The November meeting of the M.D.N.&A.A. was held in the Montreal Dental Club rooms. The President, Miss Lois Winters, presided. The guest speaker of the evening, a member of the St. John's Ambulance Corps, spoke to us on "First Aid."

A very successful Bridge and Scotch Auction was held on December 3 in aid of the Christmas Hamper Fund. The proceeds from the Auction were very gratifying due to the efforts of our able auctioneer, Dr. R. B. Bell. One of the highlights of the evening was a buffet supper prepared by the executive.

EVE MIRON.

NOVA SCOTIA:

Halifax Dental Society

The December meeting of the Halifax Dental Society was held as usual at the Nova Scotian Hotel, the President, Dr. Oxner, in the chair. There was a large turn-out to enjoy the excellent beefsteak dinner provided by the chef. With the advent of the black coffee the President introduced the speaker of the evening, Doctor Dixie Pelluet, Assistant Professor in the Biology Department at Dalhousie University. She discussed certain aspects of biological research during the past two years at Cambridge University. The informal address was listened to with an absorbed attention that was a fine tribute to the speaker. At its conclusion she answered the many question asked and I am inclined to think she enjoyed the session as much as we did.

The next meeting of the Society will take place January 15 at the Nova Scotian Hotel at 6.30 P.M. with Major Gordon Dawson and other members of the 6th Coy C.D.C. as speakers.

Accident

Dr. A. W. Faulkner was the victim of a rather severe accident to his left hand just before the Christmas holidays but is again able to attend to his practice.

Passing of Professor Nickerson

The profession in Nova Scotia is mourning the loss of Professor C. B. Nickerson, Head of the Chemistry Department at Dalhousie, who died very suddenly of a heart attack on New Year's Eve. Those of us who had the opportunity to sit under him will regret the passing of a great teacher and friend.

GENERAL NEWS

Northwestern University Receives \$50,000 for Oral Surgery Research

An additional gift of \$50,000 to Northwestern University by Alfred W. Bays and Henry B. Shattuck, trustees of the Clara A. Abbott estate, was announced December 7, 1940.

The money will be used for the study and treatment of hare-lip, cleft palate and similar facial and oral abnormalities, under the direction of Dr. Frederick W. Merrifield of the Medical and Dental faculties.

The Abbott estate, established under the will of the widow of Dr. Wallace C. Abbott, founder of Abbott Laboratories, has given Northwestern University a total of \$1,665,000 earlier in the year.

—A.D.A. Release.

American Board of Periodontology

An American Board of Periodontology has been organized by the American Academy of Periodontology for the purpose of elevating the standards of periodontology, of determining the competence of those desirous of practising as periodontists, of issuing certificates in the field of periodontology to voluntary applicants, of maintaining a registry of holders of

such certificates and of serving the public, the dental and medical professions, hospitals and dental schools by preparing and furnishing lists of periodontists certified by the corporation.

The reason for this procedure is that the profession, as well as the public, should have a means of recognizing qualified experts and of distinguishing between them and persons who seek the financial and social advantages of expert status without being qualified in knowledge, experience or skill for its responsibilities.

The following are the general requirements for candidates: graduation from an acceptable dental school of the United States or Canada; high ethical and professional standing; two or more years of practice of dentistry, largely devoted to periodontology; proof of post-graduate work in dentistry equivalent to eleven months of full-time study; a list of papers and books published by the candidate; report of three cases of varied character; a passing grade in the written and clinical examination.

Application shall be accompanied with the application fee of \$25.00. The fee for certification is \$50.00 which includes the application fee.

Special considerations have been made for those who for ten or more years prior to 1944

have been recognized by their confrères as highly proficient in periodontology. The Secretary-treasurer is Dr. Harold J. Leonard, 630 West 168th Street, New York City.

Dentistry and Public Health Meetings in Detroit

The sixty-ninth annual meeting of the American Public Health Association, which was held last month in Detroit, was a notable one in respect to the growing recognition of dentistry's place in public health.

The writer of this article has been a member of the American Public Health Association for a number of years and has frequently attended annual meetings, because he believed such association was desirable in order that the dental health worker may have a better perspective of the whole health problem and also help to promote a better understanding of the dental phase of public health. At first he felt very much alone because only two or three other dentists attended and a dental subject on any section program was a rarity.

Gradually, however, with the increase in the number of public health dentists, a change took place with increased interest on both sides. This resulted in a call going out three years ago at the convention in New York City for a luncheon meeting of public health dentists with representatives of the governing council of the American Public Health Association. The luncheon was well attended and a proposal was made that the dental group petition the governing council of the A.P.H.A. to establish a section on public health dentistry. This was opposed by several of the dentists who had been in dental public health work

for some time, on the ground that this would continue to segregate dentistry too much from other health sections. The latter opinion prevailed and it was voted that for the present at least dentistry should form an oral health group with a chairman and secretary, and that this group should meet once for a luncheon during the annual meeting of the A.P.H.A. Also, that they should use their influence to have as many dental health workers and other dentists become members of the A.P.H.A. These could affiliate with any one of the ten sections they desired, such as education or maternal and child health, etc., or become an unaffiliated member. The members and especially the officers of the group were also to use their influence to secure more dental health topics on the programs of appropriate sections.

This plan is working out very satisfactorily. This year at Detroit seven dentists were on the American Public Health Association program for papers or discussion. In addition, nine other papers were presented dealing with dental health promotion in its various aspects. Of special significance is the fact that two whole afternoon section meetings were given over entirely to dental health. One was a joint session of the public health nursing section, the school health association, and the oral health group on the subject, "Marshalling Community Forces for Dental Health." The other was a joint session of the food and nutrition section, the school health association, and the oral health group on the subject, "Nutrition and Dental Health."—*Portion of editorial from Jrl. of Mich. S. Dental Society, Nov., 1940; per A.D.A. Release.*

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

F. L. Humeston, of Drumheller, Saskatchewan, died in Calgary, December 31, following a brief illness.

He was born in Union, Iowa, and was a graduate of the University of Iowa, 1907.

Following practice in his home state he moved to Saskatchewan in 1917. In 1918 he commenced practice in Drumheller where he continued to reside until his death.

Dr. Humeston is survived by his wife, three brothers and two sisters.

. . . SECTION FRANÇAISE . . .

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La Tuberculose Buccale dans ses Relations avec l'Appareil Dentaire

par BO BURMAN et ERIC JONSSON

A l'hôpital établi par la ville de Stockholm à Söderby pour le traitement de la tuberculose, nous avons eu l'occasion de constater, chez toute une série de patients, que les plaies consécutives aux extractions dentaires se cicatrisaient fort mal. Presque toujours il s'agissait de sujets dont l'état général était affaibli et qui présentaient des lésions pulmonaires étendues. Au début, la cause de cette insuffisance du travail cicatriciel nous sembla résider en l'absence de capacités réactionnelles dans un organisme affaibli par les toxines tuberculeuses. Pour la plupart de nos malades, il est vrai, la période d'observation fut assez courte, parce que la mort ne tarda guère à survenir. Toutefois, avec le temps, nous avons pu observer un malade quelque peu plus longuement et nous avons pratiqué sur lui une excision exploratrice en vue d'un examen histologique. Il fut ainsi démontré qu'une infection tuberculeuse était venue s'ajouter, créant de la sorte une tuberculose buccale. Ce premier fait eut pour conséquence de nous intéresser à la question et depuis, en l'espace d'environ dix-huit mois, nous avons pu recueillir 14 faits nouveaux.

Les altérations tuberculeuses de la cavité buccale passent pour être relativement rares. Sur 1,000 cas de tuberculose, Rubin rencontra une proportion de 1,44 p. 100 de

tuberculeuses buccales; Morelli en trouva une de 0,05 p. 100 pour un total de 50,000 cas.

La cause de la rareté de la tuberculose buccale réside dans la grande résistance de la cavité buccale aux infections, résistance qui est à son tour déterminée (d'après Carmody) par la riche vascularisation, l'épaisseur de la couche épithéliale, le nettoyage mécanique des différentes régions de la bouche par les mouvements de la langue et des lèvres, sans parler d'autres facteurs (les facteurs immunisants biologiques, entre autres, d'après von Tappeiner).

Les lésions tuberculeuses peuvent se rencontrer dans tous les organes de la cavité buccale. C'est la langue qui est le plus souvent atteinte. D'après Carmody, qui a réuni un très grand nombre de cas, la fréquence relative des diverses localisations est la suivante: 1° la pointe de la langue, qui est la localisation la plus habituelle; viennent ensuite: 2° les bords de la langue et le plancher de la cavité buccale; 3° le voile du palais et la luette; 4° le dos de la langue et la base de la langue; 5° le maxillaire inférieur et ses gencives; 6° le maxillaire supérieur et ses gencives; 7° les lèvres; 8° le palais; 9° les glandes salivaires.

La tuberculose buccale peut apparaître à tout âge. D'après Asch (cité par Carmody), elle survient de préférence entre quinze et vingt ans. Dans la série de Carmody, l'âge moyen est de trente-six ans.

Les hommes sont atteints beaucoup plus souvent que les femmes. Sur nos 15 patients on comptait 14 hommes et une seule femme. On peut supposer que cette prédilection pour le sexe masculin est due à ce que les hommes, en général, observent beaucoup plus mal que les femmes l'hygiène de la bouche. Toutefois cette explication n'est pas entièrement applicable à nos patients, car leur hygiène buccale était assez satisfaisante. Dans notre hôpital on rencontrait certainement deux fois plus de sujets masculins que de sujets féminins ayant besoin d'une extraction dentaire; par contre, on extrayait en moyenne une dent de plus chez les sujets féminins. On est également en droit de penser que l'abus du tabac et de l'alcool diminue la résistance des muqueuses à l'égard de l'infection. Enfin, nous ne devons pas oublier que, dans un hôpital de tuberculeux, les hommes présentent en moyenne des lésions pulmonaires beaucoup plus graves que les femmes et qu'ils ont plus souvent que celles-ci des bacilles dans leur expectoration; ils sont donc plus souvent exposés à l'infection de leur muqueuse buccale par les bacilles.

La tuberculose buccale peut avoir une double origine: ou bien elle est primitive, ou bien elle est secondaire. La forme primitive est, à ce qu'il semble, très rare. La tuberculose buccale secondaire la plus commune est celle des patients atteints en même temps d'une tuberculose pulmonaire. En pareil cas, l'affection buccale se développe le plus souvent par l'inoculation directe des bacilles de l'expectoration. Mais il peut se produire également une dissémination par voie hématogène et lymphogène. Enfin, la tuberculose buccale peut résulter encore d'une propagation par continuité.

La classification des tuberculoses buccales se heurte à quelques difficultés. Le tableau clinique est en effet très variable. C'est le lupus de la cavité buccale qui est le type le plus facile à isoler des autres. D'une manière générale il présente le même tableau que le lupus ordinaire de la face. En ce qui concerne la classification des autres formes, tels auteurs recourent de préférence à des classifications fondées sur la clinique et tels autres à des classifications offrant surtout une base anatomo-pathologique. On rencontre donc des systématisations fort différentes. Nous suivrons ici la classification de Eicken, qui utilise la division de Williger, d'après laquelle, en outre du lupus, on peut distinguer

trois formes de tuberculose buccale, à savoir: 1^o l'ulcération tuberculeuse; 2^o la forme tubéreuse; 3^o la forme disséminée.

L'*ulcération tuberculeuse* est pourvue de bords irréguliers et creusés par-dessous. Sur le fond de la plaie et sur ses bords on trouve des tubercules bourgeonnants, gris, miliaires, qui en se nécrosant forment de nouvelles ulcérations tuberculeuses. Celles-ci se fusionnent les unes avec les autres, puis avec la plaie primitive, ce qui finit par augmenter les dimensions de cette dernière. L'ulcération tuberculeuse est la seule forme de la tuberculose buccale qui mérite d'être qualifiée de typique. La *forme tubéreuse* est constituée par des tuméfactions dures, dont le volume n'excède généralement pas celui d'un pois. Cette forme tubéreuse aboutit plus tard à de la nécrose et montre alors l'aspect caractéristique de l'ulcération tuberculeuse. La *forme disséminée*, enfin, se répand dans la cavité buccale entière ou presque entière. Il se développe une multitude de petits tubercules dont la nécrose engendre des ulcérations.

On trouve en outre deux formes de tuberculose buccale qui méritent une mention spéciale et que nous rangerions volontiers à part; ce sont: 5^o la périodontite tuberculeuse et 6^o la forme de tuberculose qui survient après les extractions.

La *périodontite tuberculeuse* fut décrite par Partsch, entre autres. Elle se distingue de la périodontite non spécifique par sa tendance plus grande à provoquer une fonte osseuse. Les abcès, quand il s'en produit, donnent des symptômes insignifiants. De consistance molle, tels de petits coussins, ils possèdent un contenu très fluide, séropurulent. Comme des infections mixtes viennent fréquemment se greffer sur eux, le tableau clinique qu'ils présentent se dénature souvent et ils finissent par prendre les apparences d'une périodontite banale.

La *forme de tuberculose qui survient après les extractions dentaires* se distingue en clinique par le fait que les plaies consécutives aux extractions ne se cicatrisent pas de la manière usuelle. Le processus de cicatrisation traîne en longueur, l'ulcération demeure béante avec des bords éversés qui, de même que les bourgeons charnus, se montrent mollasses. Des orifices alvéolaires s'échappent un liquide séreux ou des produits caséux. Il n'a été décrit jusqu'ici que des cas isolés de cette forme par Doutrelepon, Walther, Horner, Ehrhard, etc.

Dans ces deux dernières formes de tuberculose buccale les ganglions sont en général modérément hypertrophiés.

Quand il s'agit de la périodontite tuberculeuse, l'infection prend certainement dans la plupart des cas la voie dentaire. Il est néanmoins concevable qu'une infection hémotogène puisse également se produire. Meyer, Zilz, pour nous borner à ces auteurs, ont démontré la présence de bacilles tuberculeux dans les canalicules gangreneux des racines. Toutefois plusieurs auteurs nient la possibilité d'une infection par l'intermédiaire des dents.

Quand une infection tuberculeuse s'établit après une extraction, elle est peut-être due le plus souvent à l'inoculation des produits de l'expectoration, bien qu'à vrai dire, même en pareil cas, l'infection puisse s'effectuer par voie dentaire (par exemple, du fait d'un granulome ou de quelque lésion analogue qui aura passé inaperçue). La possibilité d'une infection hémotogène est, elle aussi, parfaitement concevable.

Chez nos patients, le diagnostic fut posé à l'aide d'une biopsie et de l'examen microscopique qui suivit. Dans beaucoup de cas, l'excision exploratrice s'opéra non seulement à l'occasion de l'extraction, mais encore à une date ultérieure, quand l'évolution peu satisfaisante du travail cicatriciel éveillait l'idée qu'on se trouvait en présence d'une infection spécifique. Les fragments prélevés au cours des biopsies étaient

envoyés au professeur H. Bergstrand, auquel nous devons une grande reconnaissance pour l'étude qu'il en fit.

Dans tous les cas, on observa un tableau histologique caractéristique avec tubercules contenant des cellules épithéloïdes et des cellules géantes du type de Langhans. Dans 3 cas, on rencontra des bacilles tuberculeux sur les coupes et le diagnostic de tuberculose est ainsi garanti. Comme la syphilis et la tuberculose donnent justement le même tableau histologique, il fallut, chez les autres patients, exclure la syphilis par voie clinique (réaction de Wassermann, anamnèse, etc.). En somme, pourtant, le diagnostic de tuberculose peut être considéré comme certain chez l'ensemble de nos malades.

Nous passons maintenant à l'exposé de nos observations. Celles qui présentent entre elles une évolution clinique analogue sont, pour plus de brièveté, discutées en groupe. Nous avons ainsi constitué quatre groupes. Mais toutes nos observations se trouvent ensuite résumées sous forme de tableau.

GROUPE I.

Ce premier groupe ne comprend qu'un seul cas. Il s'agissait d'un homme de quarante et un ans qui, en août 1933, se fit arracher les vingt dents, profondément cariées, qui lui restaient. Dans le nombre se trouvait la seconde molaire du maxillaire supérieur droit et, auprès des deux incisives gauches du maxillaire supérieur, on observait deux foyers du volume d'un pois; on les curetta. Les ganglions étaient modérément hypertrophiés. La cicatrisation parut d'abord évoluer normalement, mais, à la fin d'octobre, une diffusion hémotogène de la tuberculose pulmonaire se produisit et, au début de novembre, on s'aperçut que, du côté de la cavité buccale, la situation n'était pas satisfaisante. Le patient n'éprouvait aucun trouble subjectif et la muqueuse était partout de couleur normale, mais, à la pression, on voyait sourdre un liquide séropurulent hors des orifices alvéolaires répondant aux incisives sus-mentionnées. Auprès de la molaire se trouvait un petit orifice béant au travers duquel, avec une sonde, on arrivait sur un os dénudé. Au niveau de la première incisive, la radiographie montrait une fonte osseuse à contour dentelé du volume d'un demi-haricot; au niveau de la seconde, on observait une altération pareille, bien limitée, grosse comme un pois; près de la molaire se voyaient de petites zones plus claires en forme de coin.

Les foyers, que remplissaient des bourgeons charnus mollasses et de couleur rouge pâle, furent excisés et les fragments obtenus furent expédiés en vue d'un examen microscopique avec le diagnostic "tuberculose".

Au début de décembre, pour la première fois, l'expectoration contenait des bacilles tuberculeux. Aussitôt après, il se développa une ulcération tuberculeuse typique en la place des incisives sus-mentionnées. Les bords de l'ulcération faisaient saillie en avant sous forme d'une large barrière de bourgeons charnus (tissu de granulation), et de nombreux petits tubercules gris jaunâtre se montraient dans cette barrière, ainsi que dans le fond de l'ulcération. Les ganglions du côté gauche avaient légèrement augmenté de volume. Le patient commençait maintenant à être gêné dans les mouvements de ses lèvres. Toutefois cette gêne disparut promptement après cautérisation au paramono-chlorphénol; il en résulta même un certain effet curatif. Dans la suite l'état se maintint à peu près sans changement jusqu'à la mort survenue en avril 1934.

Dans ce cas, lors de l'extraction, il existait déjà un foyer de résorption osseuse autour de chacune des deux incisives. On peut donc supposer que l'infection vint par voie dentaire. Une inoculation par l'expectoration est moins vraisemblable, étant donné qu'on ne trouvait pas de bacilles dans les crachats à l'époque où la tuberculose

buccale fut découverte. Il convient de faire observer qu'au début le travail de cicatrisation évoluait normalement et que des phénomènes morbides ne se manifestèrent du côté de la cavité buccale qu'après la diffusion hémotogène de la tuberculose pulmonaire. On peut donc supposer aussi que l'infection eut lieu par voir hémotogène.

Cette observation est la seule de notre série dans laquelle on ait observé une ulcération tuberculeuse typique.

GROUPE II.

Nos six observations suivantes, à partir de la deuxième jusqu'à la septième incluse, présentent entre elles, au point de vue clinique, de grandes ressemblances. Après l'extraction de dents cariées, dans les observations II, III, IV et V, et d'une dent encore vivace, dans l'observation VI, les plaies opératoires ne réussirent pas à se fermer complètement; il persistait, en outre, d'étroits orifices alvéolaires, au travers desquels, avec une sonde, on parvenait sur un os dénudé. Dans la suite la muqueuse entourant les alvéoles devint plus rouge et il s'établit une très légère sécrétion. Chez deux malades, des bourgeons charnus mollasses, de coloration rouge pâle, se formèrent dans le fond des alvéoles. Les ganglions étaient déjà modérément hypertrophiés à l'époque de l'extraction dentaire et ne subirent pas ultérieurement de sensibles modifications. Deux des patients (obs. III et IV) se plaignaient d'éprouver une certaine raideur dans les mouvements des lèvres. Cette sensation disparut après cautérisation.

Examen radiographique.—Les constatations radiographiques sont peu caractéristiques: les alvéoles ne se dessinaient dans l'os que d'une manière confuse.

Les altérations observées dans ce groupe furent toutes très bénignes. Chez les malades des observations II, III, V et VI, on pratiqua des biopsies lors des extractions dentaires, mais l'examen des fragments prélevés fut négatif. Par contre, des fragments prélevés plus tard,—au bout d'environ deux mois,—donnèrent un résultat positif. Il est donc fort présumable que l'infection provenait de l'inoculation par l'expectoration.

On n'eut recours à une thérapeutique énergique que dans les observations II et V. Chez les deux patients en cause on obtint une guérison complète.

GROUPE III.

Les cinq patients des observations VIII et XII (incluse) ont entre eux de grandes ressemblances. Chez ces patients, des abcès survinrent avant l'extraction, abcès qui récidivèrent chez ceux des observations VIII et IX. Les abcès s'étaient développés sans causer de souffrance ou bien avec des malaises modérés; ils formaient des tuméfactions sous-muqueuses ayant à peu près le volume d'un œuf de pigeon, molles, fluctuantes. Les ganglions atteignaient à peu près le volume d'un haricot; ils diminuèrent légèrement après le traitement. Lors de l'incision il s'évacua un liquide purulent assez fluide. Dans les observations VIII, IX et X, la suppuration eut une durée anormalement longue et la tuméfaction se maintint. L'extraction de la dent intéressée accéléra la cicatrisation. Il persista néanmoins des fistules; la suppuration séro-caséuse qui s'en écoulait témoignait que le processus pathologique continuait à évoluer. Dans l'observation IX, des curettages, une cautérisation, puis des cautérisations ultérieures à l'acide lactique ou au perhydrol améliorèrent certainement la situation, mais, bien que le traitement se fût poursuivi pendant dix-huit mois, la guérison définitive ne put s'obtenir.

Dans l'observation XI on recourut à une intervention radicale quelques jours après l'incision. La cavité était tapissée par de rares et pâles bourgeons charnus; d'autre part, le fond du sinus maxillaire était perforé en deux points. Ces perforations guérirent

pourtant sous l'influence d'un tamponnement à la gaze iodoformée et la situation présente donne bon espoir.

Examen radiographique.—Le malade de l'observation IX offrit au début une condensation diffuse périodontique qui se montrait autour de la première molaire droite du maxillaire inférieur. Après l'extraction on vit l'alvéole se combler lentement avec du tissu osseux.

Dans l'observation VIII existait une résorption osseuse diffuse, du volume d'un pois autour du sommet de la dent; chez ce malade également l'os se dessinait bien. Dans les deux faits que nous venons de mentionner, la tuberculose paraît maintenant se limiter aux parties molles.

Pour l'observation X, malheureusement, on ne prit des clichés radiographiques qu'après l'extraction. On découvrit ainsi une communication d'aspect fistuleux avec le sinus maxillaire, communication qui n'est point encore parvenue à s'oblitérer; l'état du patient, il est vrai, ne permet pas de poursuivre le traitement.

Chez le patient de l'observation XI la fonte osseuse a le volume d'une prune; elle est assez bien délimitée et part vraisemblablement de la troisième molaire, cariée, du maxillaire supérieur droit, mais elle entoure de plus la racine de la dent voisine.

Dans les observations VIII et XI, en même temps que l'extraction, on pratiqua une biopsie qui donna un résultat positif. L'évolution similaire présentée par les autres cas nous fait présumer que, chez tous les patients, il existait une tuberculose buccale avant l'extraction dentaire et que l'infection prit la voie dentaire. Il s'agissait par conséquent de périodontites et d'ostéites tuberculeuses.

Chez le patient de l'observation XII le développement de la tuberculose buccale se trouva en rapport avec une dentition difficile (difficulté d'éruption de la dent de sagesse). Dans ce cas, l'infection se produisit évidemment par l'intermédiaire de la poche gingivale entourant la dent de sagesse.

GROUPE IV.

De même que dans le groupe précédent, il s'agissait ici de périodontites tuberculeuses, mais dans le présent groupe il ne se forma pas d'abcès, circonstance qui aurait dirigé l'attention vers l'existence d'un processus pathologique.

L'observation XIII nous apprend que ce fut seulement par hasard qu'on découvrit un granulome, gros comme un pois, lors de l'extraction de la seconde prémolaire du maxillaire supérieur droit. Ce granulome fut enlevé à la curette, examiné au microscope et trouvé de nature tuberculeuse. La guérison complète s'obtint sans autre traitement.

Dans l'observation XIV on note qu'il s'était produit une fonte osseuse importante, mais tout ce qu'on voyait était une fistule au niveau de la première prémolaire de la mâchoire supérieure droite. La dent fut extraite. A cette occasion on découvrit au niveau de la deuxième prémolaire un gros foyer entièrement rempli de bourgeons charnus rouges. La dent fut tout d'abord respectée, car le patient, quand on le soumit à un forage d'épreuve, soutenait obstinément que cette dent était vivante. Toutefois, comme la guérison semblait tarder, on pratiqua une intervention radicale accompagnée d'une cautérisation. Le traitement ultérieur fut complété par l'emploi de l'arc lumineux et la guérison paraît maintenant évoluer d'une manière tout à fait satisfaisante.

Le patient de l'observation XV subit récemment l'extraction des deux dernières molaires gauches de la mâchoire supérieure et le curettage de leurs alvéoles. Lors de cette intervention on découvrit une communication avec le sinus, communication qui a pourtant considérablement diminué sous l'influence du tamponnement.

Si maintenant nous tentons de résumer les données qui ressortent de ces 15 observations, il semble qu'on soit en droit de dire: les dents paraissent jouer un grand rôle comme source d'infection dans la tuberculose buccale. Pour 5 de nos observations il en fut certainement ainsi; pour deux autres ce fut extrêmement vraisemblable. Dans les cas où la biopsie, pratiquée aussitôt après l'extraction, donna un résultat négatif, ce dernier fut peut-être dû à ce que les produits recueillis après l'extraction étaient insuffisants, mais il nous semble des plus probable que l'infection vint alors par l'intermédiaire de l'expectoration.

Dans la plupart des cas, les ganglions étaient modérément hypertrophiés. Un seul patient (obs. VI) avait une tuberculose ganglionnaire du cou, laquelle avait été opérée avant qu'il se trouvât sous notre observation. Il nous fut néanmoins impossible de constater quoi que ce fût qui plaîdât en faveur d'une relation avec les dents. Mais comme, d'après nos recherches, les périodontites tuberculeuses semblent assez communes, nous pensons qu'en cas de lymphome cervical on doit songer à la possibilité d'une infection par voie dentaire. Cette possibilité a déjà été signalée par Stark, Libin et Holzmak.

Du point de vue de la clinique interne, nos malades n'offraient qu'un intérêt assez médiocre. Une chose certaine est que la plupart méritaient d'être qualifiés de mauvais cas.

D'une manière générale on peut dire que, chez nos malades, la tuberculose buccale n'exerça pas en somme une influence notable sur le tableau clinique de la tuberculose pulmonaire, car les deux affections présentèrent chacune une évolution assez indépendante l'une de l'autre. Sur la température, la réaction de sédimentation ou l'état général la tuberculose buccale ne paraît avoir qu'une influence passagère.

Le diagnostic de la tuberculose buccale, telle que nous venons de la décrire, doit incontestablement s'appuyer sur un examen microscopique. Nous pensons néanmoins que, de temps à autre, on rencontre certains traits caractéristiques qui permettent de poser un diagnostic de probabilité d'après le seul tableau clinique. Ceci est surtout vrai des cas où il s'est développé des abcès à la suite de périodontites tuberculeuses. Comme nous l'avons fait observer plus haut, ces abcès sont remarquables par le peu de gêne qu'ils causent. Ils n'ont qu'une faible tension et, au doigt, ils semblent fort mous. A l'incision, il s'écoule un liquide filant, séro-purulent. L'examen radiographique montre chez plusieurs malades une résorption osseuse importante et de forme arrondie; elle n'est pourtant pas aussi bien délimitée qu'un kyste.

Le pronostic de la tuberculose buccale primitive passe généralement pour être bénin; en échange, celui de la tuberculose secondaire est regardé comme mauvais. La tuberculose buccale secondaire dont l'origine est en rapport avec l'appareil dentaire semble pourtant d'un pronostic beaucoup plus favorable. C'est ainsi que, parmi nos malades, ceux des observations II, V et XIII guérirent complètement et ceux des observations IX et X furent considérablement améliorés. Ceux des observations VI, XI et XIV ne furent observés que pendant un temps très court, mais chez eux également il semblait exister de bonnes tendances à la guérison.

Dans les publications médicales le chapitre de la thérapeutique est très sommairement traité. On recommande les caustiques chimiques ou thermiques, la galvanocaustique, la lumière de Finsen, les rayons de Röntgen ou le radium. Avant tout peut-être il convient de recommander l'intervention radicale, notamment dans les formes primitives, mais aussi dans les formes secondaires, quand les altérations pulmonaires sont discrètes, car, en pareille circonstance, on peut espérer qu'une réinfection

plus intense ne résultera pas de l'expectoration. Pour notre part, nous avons obtenu de bons effets du traitement radical. Dans les lésions qui s'y prêtaient il fut combiné à la thermocautérisation. Comme traitement ultérieur, l'iodoforme et le perhydrol paraissent avoir une heureuse action. Chez le sujet de l'observation II on exécuta une prothèse totale malgré la tuberculose en cours; la guérison évolua néanmoins sans incident.

Les travaux publiés donnent l'impression que la tuberculose buccale en relation avec l'appareil dentaire est une affection particulièrement rare. Nous croyons pourtant que cette rareté n'est qu'apparente et provient de ce que jusqu'ici l'attention ne s'est pas suffisamment portée vers ce genre de maladie. A l'appui de cette opinion nous ferons valoir le fait qu'à l'heure actuelle, en l'espace de seulement dix-huit mois, nous avons recueilli une série de 15 cas, série plus considérable qu'aucune de celles qui, à notre connaissance, furent antérieurement publiées. La raison pour laquelle nous avons des observations relativement aussi nombreuses provient certainement et uniquement de ce que, pendant ce temps, nous avons systématiquement fait examiner au point de vue anatomo-pathologique tous les cas suspects.

Si l'on nous imite, on arrivera certainement à la conviction qu'il s'agit non pas d'une forme morbide rare, mais, au contraire, d'une affection passablement commune.

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Le blocage bi-maxillaire par ligatures selon le procédé de R. H. Ivy

par JEAN BERCHER,

Stomatologiste des Hôpitaux militaires, Médecin Chef du Val-de-Grâce.

Le traitement des fractures des mâchoires, spécialement des fractures mandibulaires, nécessite le plus fréquemment l'immobilisation du maxillaire inférieur contre la mâchoire supérieure, en occlusion et en bonne position d'articulé dentaire.

De multiples procédés s'offrent au Stomatologiste pour réaliser ce *blocage bi-maxillaire*. On peut les classer en trois groupes: les gouttières, les attelles et les ligatures: chacun de ces groupes comprenant de nombreuses variétés. Les gouttières exigent toujours une prise d'empreinte et des manipulations au laboratoire de prothèse. Les attelles peuvent être mises en place plus rapidement et sans le secours du laboratoire, la technique décrite par Pont et plus encore celle de Ponroy constituent de bonnes méthodes de blocage et d'application aisée. Cependant, il est incontestable que les ligatures interdentaires sont plus simples encore et, que, bien exécutées, elles peuvent donner une immobilisation parfaite des fractures. Parmi les variétés de ligatures, celle qui a été décrite par le prof. Robert H. Ivy de Philadelphie est de beaucoup la plus facile à réaliser. Elle n'exige aucune instrumentation spéciale, elle peut être faite au lit même du malade et en quelques instants, enfin, elle est applicable sur

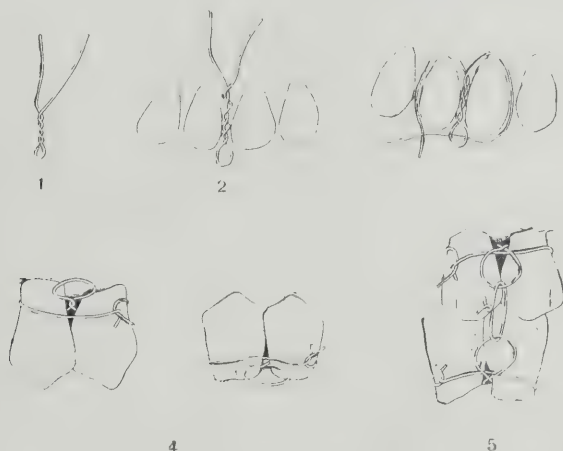
les dents temporaires des jeunes enfants aussi bien que sur les dents permanentes des adultes.

Ivy a présenté sa "méthode pratique de fixation dans les fractures mandibulaires" en 1922 dans le journal de *Surgery, Gynecology and obstetric* et dans le *Journal of the American Medical Association*. Il en a repris la description en 1927 dans le *Military Surgeon* à propos de l'immobilisation de fragments maxillaires en vue du traitement par greffe ostéo-périostique des pseudarthroses de guerre.

Ivy donne son procédé comme une modification d'une méthode déjà exposée en 1887 par le Dr Glimmer et il le décrit de la manière suivante:

"On choisit un fil métallique très fin (22 à 24 gauges) de cuivre ou de bronze. Le fil qui sera attaché aux dents a une longueur de 6 pouces; il est plié autour d'un instrument lisse de manière à faire une petite boucle ou œillet au milieu du fil. Les dents choisies pour la ligature sont d'habitude les prémolaires de chaque côté et les incisives centrales. Si ces dents manquent ou sont inutilisables pour servir d'attache, d'autres dents sont choisies. Les deux chefs de la boucle sont passés dans l'espace interproximal de deux dents, par le côté vestibulaire vers l'intérieur de la bouche. Ces chefs sont alors retournés vers le vestibule, chacun d'eux contournant l'une des dents choisies; puis ils sont tordus ensemble de telle sorte que le fil enserre étroitement les dents, avec l'œillet saillant hors de l'espace interproximal. Les bouts sont coupés et retournés pour qu'ils n'offensent pas les lèvres ou les joues.

"La même ligature est ajustée aux dents homologues du maxillaire opposé. Puis on agit de même de l'autre côté de la bouche, en haut et en bas.



Schémas montrant les temps successifs de l'exécution des ligatures.

"Alors, les boucles du haut et du bas de chaque côté sont unies par le passage dans les œillets d'un troisième fil métallique. Les dents sont placées en bonne occlusion et fixées par torsion des chefs du troisième fil. Les bouts de ce fil sont aussi coupés et retournés."

L'expérience nous a appris que ces ligatures, d'exécution toute simple, peuvent être faites avec n'importe quel fil métallique suffisamment fin et suffisamment résistant à la torsion et qu'elles réalisent un blocage très solide. Dans des cas où la réduction des fragments ne pouvait être obtenue d'emblée, il nous est arrivé de remplacer le troisième

fil métallique, fil d'union intermaxillaire, par un lien élastique dont la traction douce et constante amenait rapidement la coaptation au maxillaire supérieur du fragment inférieur dévié.

Outre sa facilité d'exécution, ce procédé de ligature intermaxillaire offre l'avantage de permettre en cours de traitement de vérifier la consolidation et de surveiller l'intérieur de la cavité buccale. Il suffit de sectionner le troisième fil, le fil d'union, pour que soit possible l'ouverture buccale; le remplacement de ce fil est ensuite tout simple puisque les fils principaux d'attache n'ont nullement été abîmés.

Conseils Pratiques

Recueillis par A. AMOEDO

Extraction d'un tire-nerf cassé dans le canal.

Introduire une solution concentrée de chlorure de sodium dans le canal et la chambre pulpaire, obturer sous gutta. Après deux ou trois jours l'acier est oxydé et l'extirpation du tire-nerf se fait plus aisément.

A. MOLYNEAUX, *South African Dental Journal*.

Polissage des appareils en or.

On obtient un polissage rapide de l'or en utilisant une gomme ronde à effacer de machine à écrire, montée sur le tour d'atelier.

A. MOLYNEAUX, *South African Dental Journal*.

Conservations des bains photographiques.

La détérioration des solutions "révélateur et fixateur" est conséquence d'oxydation. Pour les conserver, il faut donc réduire au minimum leur contact avec l'air.

La solution de réserve conservée en flacon, doit toujours remplir celui-ci complètement. Plus il y aura d'air entre la solution et le bouchon, plus le risque d'oxydation sera grand.

Dans un large bain, le contact avec l'air, et par conséquent la détérioration, est au maximum.

Pour éviter cet inconvénient, on laissera flotter à la surface une feuille de papier ciré de la dimension du bain, de façon à ce qu'elle arrive à toucher les parois du récipient.

Le Journal Dentaire Belge, Bruxelles.

Obturation des canaux.

Les conditions auxquelles doit satisfaire un produit pour terminer un traitement radiculaire.

- 1° N'être pas irritant.
- 2° Ne pas subir de changements de volume.
- 3° S'adapter aux parois du canal.
- 4° Etre stérilisable.
- 5° Etre insoluble dans les liquides organiques.
- 6° Ne pas colorer la dent.
- 7° Pouvoir être retiré avec facilité.
- 8° Pouvoir sceller hermétiquement le canal.
- 9° Etre radioopaque. (Note du traducteur).

DR E. JUNNOR, *Revista Dental de Chile*.

Section Française

Point de contact des amalgames.

Pour améliorer les points de contact, ajustez la matrice, marquez la position du point de contact, enlevez la matrice, placez-la sur quelques feuilles de papier mou, et brunissez. La matrice deviendra concave à la partie brunie et le bord gingival s'adaptera d'autant mieux.

Le Journal Dentaire Belge, Bruxelles.

Proportions pour faire un alliage fusible.

Bismuth	2
Plomb	1
Etain	1

El Mecanico Dental, Buenos-Ayres.

Formule pour obturer les canaux radiculaires.

Résine pulvérisée très fine.

Oxyde de zinc pur calciné.

Thymol iodé.

Thymol.

Faire une pâte avec de l'alcool à 95°. La pâte est bourrée dans le canal, l'obturation est ensuite complétée avec une pointe en plomb, de taille appropriée.

Pour coiffer la pulpe vivante, mélanger la poudre à une solution faite d'essence de girofle et d'alcool à 95° à parties égales.

J. P. BUCKLEY, Dental Items of Interest.

Pour adapter une couronne.

Lorsqu'une couronne force pour être ajustée sur le moignon, faire couler à l'intérieur de celle-ci un peu de cire noire (cire servant à tenir les dents à crampon), elle marque le moignon qu'il est aisé ensuite de meuler.

Revista Dental de Chile.

Pour enlever le rouge des appareils de prothèse.

Laver l'appareil avec une solution chaude de bicarbonate de soude.

Revista Dental de Chile.

Une formule pour faire de la soudure à 18 k.

Or à 24	14.4
Cuivre	2.4
Argent	0.8
Cadmium	1.7

El Mecanico Dental, Buenos-Ayres.

Contrôle de la douleur.

Quand on veut se rendre compte de la douleur, il est inutile de poser des questions. Regardez plutôt dans les yeux du patient.

Journal Dentaire Belge.

Nouvelles de la Société Dentaire de Montréal

La Société Dentaire de Montréal a tenu sa dernière séance de l'année 1940, le 19 décembre.

A cette occasion, les membres eurent l'opportunité de voir un film cinématographique, intitulé: "Les couronnes et les restaurations en porcelaine", pellicule réalisée par le docteur Milton Cohen de New-York. De plus, les confrères dont les noms suivent, présentèrent de courts travaux dont voici la liste:

Dr E. Pelletier: "La dentiste est-il tenu d'extraire toutes les racines dentaires des maxillaires?"

Dr Edmour Casgrain: "La protection des pulpes sous les obturations en silicate."

Dr Georges Larue: "La phase la plus importante dans la fabrication d'un dentier."

Dr Irénée LeBlanc: "Le remplacement des incisives inférieures."

La séance de janvier fut tenue, mercredi le 15 du mois. Le conférencier invité pour la soirée était le docteur Félix A. French, d'Ottawa, prothésiste de réputation internationale. Le dr French comme sujet de sa démonstration: "Les dentiers en substance acrylique."

De plus, les membres suivants ont présenté des communications:

Dr Armand Fortier: "La perception des notes du dentiste."

Dr Gérard Plamondon: "Le dentiste doit-il prescrire une diète à son patient? Si oui, quelles sont ses limites?"

Dr D. Graton: "La réception de l'enfant à sa première visite chez le dentiste."

Dr Claude de Grandmont: "Le traitement des hémorragies secondaires."

Dr A. Masson: "Le traitement de la dentine avariée au fond des cavités profondes."

La réunion du mois de février aura lieu le troisième mercredi du mois c-à-d., le 19 février. Le programme de la soirée comprend la présentation des travaux suivants:

Dr Ephrem Vinet: "Quand employez-vous les ponts fixes et quand employez-vous les dentiers partiels?"

Dr Paul Frigon: "Quelle méthode avez-vous d'éliminer les régions cervicales des dents sensibles au toucher, au chaud et au froid?"

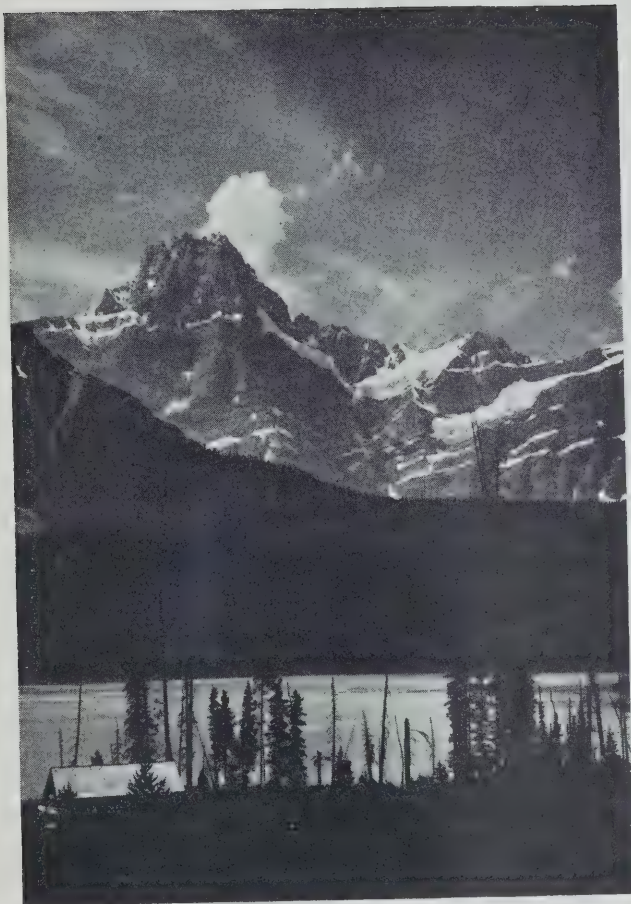
Dr Isaïe Clairoux: "Dans un cas de fluxion employez-vous le chaud ou le froid?"

Dr Roland Brossard: "Quel matériel employez-vous pour obturer les dents temporaires?"

DR GERARD DE MONTIGNY, *Président.*

Le congrès

N'oublions pas le grand congrès qui sera tenu à Québec.

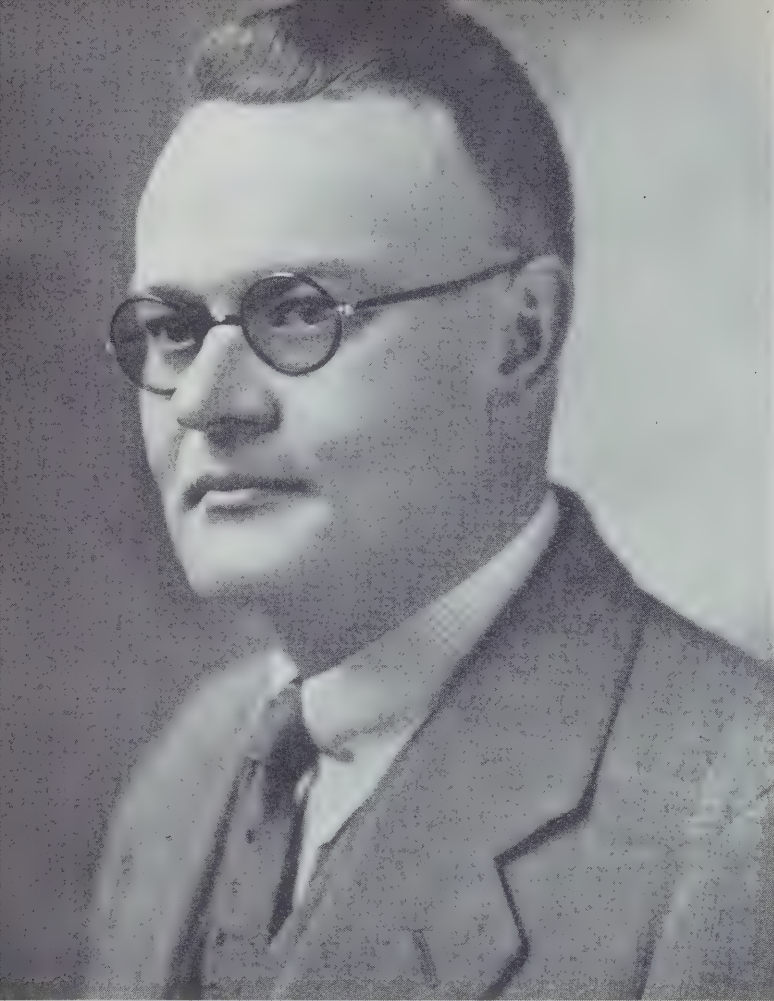


Photograph by Dr. J. S. Bricker, Vancouver, B.C.

MOUNT CHEPHREN

Thirty-nine miles from Lake Louise on the Banff-Jasper highway is Lower Waterfowl Lake, a favourite feeding ground for moose, among the lily pads and weedy shores. One is sure to see them and may get quite close for photographs. Across on the west side is Mount Chephren, altitude, 10,715 feet.

Most nervous folk are suffering from under-work. Under-work is an ailment that kills far more people than over-work. Plan your days to pack them as tight as sardine tins with occupation for body and mind. Allow no interest to go undeveloped, let no latent talent be unused. Discover new possibilities of adventure in every task; discover new tasks to adventure upon. Run every risk of dying from over-work, rather than take the greater risk of living in boredom.—Peter Fletcher in "Mastering Nerves."



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Normal and Abnormal Conditions in Children's Mouths and Suggested Treatment*

by JOSEPH T. COHEN, D.D.S., Minneapolis, Minnesota

IN ORDER to be successful in any course of endeavour, one must first feel the necessity, second have the desire, and third, be willing to make sacrifices to accomplish the ends desired. This holds true especially in the successful care of children's mouths.

"Human progress marches forward only when children excel their parents." This is a slogan which adorns the cover of the A.S.P.C.D. journal. If it is our desire to do the most good for our patients, and at the same time develop a lucrative and successful adult practice which will remain constant for a maximum time, then dentistry for children should become an important part of every man's practice.

One serious problem frequently encountered by many in the care of children's mouths is the inability to obtain the complete co-operation of the child patient. Individual operators will employ individual methods of handling various types of children. There is one thought, however, that is worthy of consideration by all, which if followed will assist materially in better and more complete co-operation of the little patient.

TIME OF APPOINTMENTS

Dr. Florence Goodenough of the Institute of Child Welfare at the University of Minnesota in her book, "Anger In Young Children", deals with the frequency of anger outbursts and the times of the day when children are likely to behave best. She found that children are more easily controlled early in the morning, directly after naps, and after meal time, and that they are more disturbed as they approach their bedtime and their mealtime. In other words, children are cared for more easily in the early portion of the morning between eight and ten o'clock, than they are between eleven and twelve o'clock. Then again they are more at ease directly following their afternoon naps, if they still take them.

But what do we do? Most children are taken care of in the dental office after school hours, between four and six o'clock in the afternoon, or at an hour when the least amount of co-operation may be expected. Doing dental work for children is bound to be difficult at times, and every means should be used to assist in obtaining the child's co-operation. Caring for the child patient at a time when he

* Read before the North Side Dental Society, Minneapolis, Minn.—Nov. 8, 1940.

is least tired should help materially in simplifying the work.

X-RAYS

The importance and necessity of x-rays as a routine procedure in rendering the most efficient service to the child patient cannot be overemphasized. Many conditions, such as supernumerary teeth, congenitally missing teeth, unsuspected deep caries, root absorption, and abnormal eruption, all may be diagnosed earlier with the aid of x-rays and help present a better picture of the condition of the child's mouth. In determining the dental needs of the child and making a proper diagnosis, a full-mouth x-ray, or at least good bite-wing x-rays are practically always necessary. Frequently x-rays are dispensed with because of difficulties encountered in obtaining pictures of diagnostic value. Most children's mouths are tiny and in these cases it is extremely difficult to obtain good pictures with the regular-size film. The use of miniature films simplifies the procedure, and will result in more complete co-operation of the young patients and hence in better negatives.

Many operators agree that the efficient care of the first permanent molar is very important in maintaining a healthy mouth. This tooth has been lost in 25 per cent of individuals by the time they are eighteen years old. Practically all first permanent molars erupt with defective pits, fissures or grooves. These defective areas should be cared for as soon as possible after the eruption of the teeth. Shallow grooves may be ground out with small stones and then polished smooth with finer stones and sandpaper disks. Deeper defects must always be filled with metal or silicate restorations.

A condition which has proved of great concern to the patient, and particularly the dentist, is the development of white spots along the labial and buccal gingival

areas of the teeth. When these white spots have penetrated through the enamel, removal of the decalcified areas and their restoration with a filling is the only procedure to follow. However, if the condition is observed in its early stage before all the enamel has been destroyed, often the white chalky portion may be removed by diskings, and the tooth then polished with finishing stones and sandpaper disks. The patient should then be instructed in the proper method of tooth brushing, and the need for an adequate diet. If these instructions are rigidly followed, the white spots seldom recur.

The x-ray frequently picks up beginning interproximal caries. As deciduous teeth decay much more rapidly than the permanent ones, it is advisable to use some immediate means of inhibiting the progress of decay and of protecting the interproximal areas. Dr. Prime recommends the use of ammoniacal silver nitrate and eugenol. Frequently this procedure is a distinct help in keeping the areas from becoming progressively worse.

RESTORATIONS

Where caries has penetrated into the dentine, the carious areas should be restored with fillings. In deciduous teeth where the decay is shallow and does not undermine the marginal ridge, access may be obtained through the buccal wall and the cavity filled. This procedure should be followed only in carefully selected cases, and they should be examined periodically with x-ray and explorer.

Frequently opportunities lend themselves to the advantageous use of the spot filling in first permanent molars. The mesial surface of this tooth should be examined immediately following the loss of the second deciduous molar, and previous to the eruption of the succeeding second bicuspid. Should a decalcified area or one of beginning caries be found, it should be either disked smooth, or re-

moved and replaced with an amalgam restoration. At this stage the area is easily accessible and a comparatively simple operation will prevent the future need of a large restoration.

Because of its seriousness and frequently hopelessness, rampant caries often causes considerable disturbance to those of us who are trying patiently to restore a child patient's mouth to a healthy condition. In cases where considerable tooth structure has been destroyed, it is sometimes impossible to make the accepted types of cavity preparation. The only recourse is to do the best we can under existing conditions. In cases where the tooth is simultaneously affected with caries on the labial, lingual, mesial, distal, and occlusal surfaces, it is often good practice to use an orthodontic gold band to restore the tooth to normal function.

First, sterilize all exposed caries with whatever method is deemed best. Some operators use 95 per cent phenol and claim that this is the best method of sterilizing the carious areas. However, most operators are agreed that silver nitrate is more effective.

Next, exposed carious areas are treated with silver nitrate and eugenol, the soft decalcified dentine is scooped out with large spoon excavators, and the remaining caries removed with sharp round burs. An orthodontic band is then constructed from 33 gauge gold band material and cemented in place. The occlusal surface of the tooth which shows exposed cement can be restored with amalgam. This type of restoration will serve several purposes. It prevents marginal chipping of the amalgam, allows for heavy mastication, and prevents further decay of the tooth.

Whenever possible always use a metal filling material to restore posterior teeth. Proper preparation should be made and an amalgam filling or gold inlay inserted. The selection of material is determined by the case at hand, the judgment of the

operator and the desire of the parents.

Where caries is rampant, and the pulp is not infected, but the cavity is close to the pulpal wall, it is an excellent policy to line the cavity with a sedative cement. Zinc oxide and eugenol is a convenient and effective material and should be used routinely as a lining in all large restorations.

Some dental practitioners recommend the extirpation of all pulps, should a surgical exposure occur. Another group feels that these exposures may frequently be capped and the teeth be retained in a healthy condition for a considerable time, often until the time for normal exfoliation. The simple application of a zinc oxide and eugenol paste as a pulp capping has been recommended by many dentists as a safe and effective method of treating such teeth. I have observed considerable success as the result of capping these cavities and reconstructing the tooth with a permanent restoration. These teeth should be examined frequently however, and carefully checked by means of the x-ray.

It is impossible to reconstruct a posterior deciduous tooth with a compound amalgam restoration unless a matrix is used. Until recently there was no good matrix on the market for this purpose, and it was very difficult to place a good compound amalgam filling in a deciduous tooth. The old type of matrix got in the way of the tongue, impinged painfully on the gum tissue, and presented many other annoying problems. A method of constructing a matrix for each tooth which fills all the requirements has been demonstrated several times by Dr. Gillam of Austin, Minnesota.

An individual matrix is made for each tooth. The material used is annealed, stainless, steel ribbon, .002 thick and 3/16 inch wide. A strip the desired length is fitted around the tooth and the ends pinched together with a number 110

plier. An S.S. White riveting punch is used to rivet the band, which is then festooned to fit the gingival of the tooth, the ends are bent out of way, and a stimulent wedge is inserted below the contact point.

I prefer this type of wedge to a toothpick because it is pliable, does not impinge on the tissue, and adapts itself very well. The problem of compound amalgam restorations is greatly simplified when this type of matrix is employed.

SUMMARY

1. The care of children's mouths is extremely important and valuable to a dental practice.

2. Children are best handled at times when they are most rested.
3. X-rays should be used frequently, and small films are extremely helpful in obtaining x-rays for children.
4. The first permanent molar should be cared for early and white gingival decay may be eliminated frequently before cavities develop.
5. Interproximal decay should be cared for early.
6. Rampant caries is not so serious a problem if bands are used to help reconstruct the affected teeth.
7. The restoration of badly decayed deciduous teeth is not a difficult problem when a suitable matrix is used.

1439 Medical Arts Building.

Report of the Field Secretary of the Canadian Dental Hygiene Council Activities Since Last Meeting

VERY stimulating to this Council was the interest manifested by the new school teachers from all over Canada in our program of addresses given to Normal School students last year. At that time, we advised them to write, as soon as they had teaching positions, to our headquarters giving us their new address. During the month of September this year, at the opening of school, we had requests from over 600 new school teachers, for teaching aids on mouth health and printed literature for distribution to their pupils.

This establishes the fact that we have aroused sufficient interest in Mouth Health to create a large number of potential Public Dental Health workers, workers who will impart the newer knowledge and the importance of Mouth

Health to little children at a time and under conditions when they are most receptive. The response to these addresses has given us an unusual opportunity to evaluate our efforts.

The far reaching effect of this Normal School Campaign is obvious. We therefore entered upon our program of addresses to Normal Schools this year, with a new spirit, realizing that the interest in health teaching was there; these new teachers are keen for assistance in teaching better health, and our greatest task was to choose material that was right.

I am convinced that of all the work the Canadian Dental Hygiene Council has carried out, there is nothing more certain of far-reaching results than this program of addresses to Normal School students.

During October and November, I visited the three provinces, Manitoba, Saskatchewan and Alberta, and gave a series of addresses to each Normal School in these provinces, except one of the schools in Manitoba which had to be deferred until later. The Department of Health carried through the organization of this program in each Province, and the gracious reception accorded us by the principals and the students, was heartening.

Instead of distributing literature to the students at this time, we have advised them as we did last year, to make personal application for it to our headquarters as soon as they begin teaching. This eliminates the possibility of a waste of material.

In the Province of Saskatchewan, on request, we remained three weeks, one week each in Saskatoon, Regina and Moose Jaw. Addresses were given to high school pupils and the upper grades of public school pupils, and an address to each of the service clubs.

It is twelve years since we conducted an educational campaign in the Province of Saskatchewan, and it was considered advisable that we endeavor, through this program, to foster public opinion to support the expenditure of the generous sum which the Saskatchewan Department of Health appropriates each year for dental hygiene. The dental profession gave us excellent support in this program; in the City of Moose Jaw this was outstanding. An average of twenty addresses each week was given in the three cities, contacting some thousands of individuals.

In November, this Council participated jointly with other health agencies in a public health project instituted by the Welfare Council of Canada, under the direction of Dr. Janet Lang. This took the form of one-day Public Health Institutes in the rural districts of Lanark

and Elmsley, near Ottawa. Representatives of six Canadian public health organizations took part—the Welfare Council of Canada, National Committee of Mental Hygiene, Victorian Order of Nurses, Ontario Society for Crippled Children, National Institute for the Blind, Canadian Dental Hygiene Council, and the Ontario Department of Health, represented by Miss Edna Moore. These meetings convened at 2:30 in the afternoon and continued throughout the evening. They were well attended, especially the one in Lanark. A short talk on the work of each organization was given by its representative, and following this a panel discussion or round table was conducted. The questions written and dropped in a box by those present were answered, resulting in a sort of "Information Please." I consider that this is a very effective way of teaching public health, as it confines the discussion to matters that are important and sometimes of vital interest to the community. You would probably be amused at the subjects and the scope of some of the questions asked. I would suggest a continuation of these programs in rural districts if finances will permit.

While in Ottawa, a short conference was held with Dr. Wodehouse, Deputy Minister, and Dr. Heagerty, Assistant Deputy, relative to the work of the Council and the possibilities of our grant for the coming year, also an interview was held with Dr. Wilson, Director of Dental Services under the Department of Pensions for returned soldiers.

There is a significant change in the presentation of health lectures to the troops in this war. During the last war such addresses were relegated to the period devoted to entertaining during the evening as a sort of extra, and were not entirely compulsory, but in this war, health addresses are given in the regular course of instruction, by Officers of the Dental

Corps, equally important to instruction in manoeuvres and tactics and general military matters. That, I think, is a big advance in health education, and is as it should be. At Col. Lott's request, our Council forwarded aids in the preparation of these addresses, charts, outline lectures, etc., etc.

Our program for this year's work is as follows: A visit was made to the Province of Quebec to consult with three dental committees in Montreal, relative to dental services in that City and throughout the Province. The Provincial Society is endeavouring to arouse the interest of the Quebec Department of Health in public dental health, and some success in accomplishing this is already apparent.

The Catholic School Commission in Montreal has entirely eliminated the dental services to school children, that have been in existence for several years. The assistance of the Council has been asked in an attempt to have these restored. We have already had some correspondence with this Board.

Under the auspices of the Junior Red Cross and the Chairmanship of Dr. Arthur Walsh, Dean of the Dental Faculty, McGill University, eight clinics have been established for protestant school children. The Committee hopes to enlarge this number.

This Council has committed itself to continue the Better Mouth Health Campaign in some towns and cities in the Province of Ontario from January 15 to April 15, on condition that we may discontinue to take care of any new work which the Council may decide upon. It is to be hoped that some plan can be worked out whereby a campaign may be conducted in the City of Ottawa. There have been requests for this from school inspectors and school officials, and this matter will be considered, I am sure, by the Public Dental Health Committee of the Ontario Dental Association.

Following April 15, for two weeks, there will be the meetings of the Ontario Educational Association and various other health and educational bodies held at Toronto, which will require our attendance. The annual trip through Western Canada to interview all health and educational officials and the government officials of various provinces will follow.

In this report, as in every one which I have written since the War started, I would reaffirm, "that it is essential that the Canadian Dental Hygiene Council should endeavour to take an active part in some definite war-time project." We are constantly on the alert to bring this about.

—HARRY S. THOMSON,
Field Secretary.

Through all my years of experience in the science of healing, one thing which has always struck me has been the happiness, the well-being, and the youthfulness of those who are so interested in the world around them that they have no time in which to brood over their troubles, their vicissitudes, or their pains. They are so interested in life, that life, it would seem, is doubly kind to them, and repays them with increasing health, happiness, and contentment as the years go by.—Stanley Lief in "Health for All."

Down Hitler With Dollars — Buy War Savings Certificates.

Median Anterior Maxillary Cysts*

by GEORGE A. MORGAN, D.D.S., Toronto, Ontario

PROBABLY the most commonly misinterpreted diagnostic problem to be found in the anterior maxillary region is that of the median line cyst. This is due in part to the fact that dental literature contained few, if any references to this condition prior to 1931 when Meyer¹ of Stanford University described his findings, basing his conclusions on a study of hundreds of cadavers sagittally sectioned. Stafne² of the Mayo Clinic reported in the same year a series of Median Line Cysts disclosed in connection with supernumerary anterior central incisors. Later this same author along with Austin and Gard-

ner wrote at some length on the subject.³

Since these papers are found in the Journal of the American Dental Association and therefore are not available to the vast majority of Canadian dentists, this summary is written in the hope that this condition will be more widely recognized, thereby saving many sound anterior teeth which would otherwise be sacrificed. The author's personal observations and cases are recorded and illustrated.

Median Anterior Maxillary Cysts are situated in the incisive canal and their incidence is not less than one in every hundred. They are supposedly derived

Figure 1.

Dentigerous cyst. Impacted supernumerary central incisors.



Figure 2.

Occlusal ray of case. Note extent of cyst, presence of nasal spine and that the median line suture bisects the cyst.



* Presented at the Mid-Winter Clinic, Toronto Academy of Dentistry, Royal York Hotel, December 4, 1940.

from epithelial remnants which persist in the interincisive region. Pathologic sectioning will reveal that their lining membrane is ciliated, transitional and squamous epithelium demonstrating that in part at least, they belong to nasal structure.

The majority of Median Line Cysts lie well within the anterior palatine canal and it is therefore difficult to distinguish roentgenographically between them and the anterior palatine fossae. When these cysts are displaced laterally as is frequently the case in roentgen rays taken in the anterior lateral position, they may be superimposed over the lateral incisor roots and thus be mistaken easily for a radicular cyst. Median Line Cysts which are limited in size are considered to be without clinical significance. Frequently, however, the Median Line Cysts will become infected, enlarge and breaking down the walls of the anterior palatine fossae,

invade the palate. Probably some of the large cysts of the maxilla whose aetiology is obscure should be thus classified. In many instances they have been known to exert sufficient pressure on the anterior palatine nerve to produce considerable pain.

There is no doubt that dentigerous cysts develop in association with supernumerary central incisors. Fig. 1. The presence of a supernumerary tooth and a large cyst in the anterior part of the maxilla is not conclusive proof that the cyst is dentigerous. In some instances, Median Anterior Maxillary Cysts continue to grow and encroach on or envelop supernumerary teeth, the presence of which is merely coincidental.

Probably the best aid in roentgenological differential diagnosis is to observe the condition in an occlusal ray, not depending entirely on the customary intra-oral dental ray of the maxillary central incisors. Median Line Cysts will gener-

Figure 3.

Large radicular cyst. Occlusal ray. Note position of cystic cavity to one side of the median line suture.

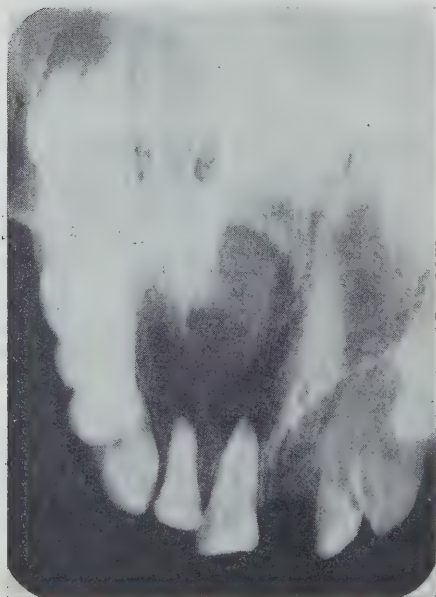
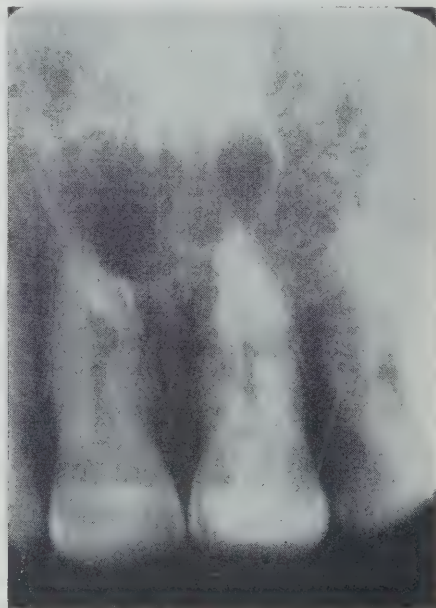


Figure 4.

Dental ray illustrating twin median line cysts.



ally be observed to be spherical and divided by the median line suture as illustrated in Fig. 2. This will be found to be in strict contrast to cysts or infected areas about centrals or laterals which have a tendency to be observed on either one side or the other of the nasal spine. This is illustrated in Fig. 3. In many instances, two separate cysts are found, one on each side of the mid-line as illustrated in Fig. 4. Frequently one is able to trace in the dental rays of the anterior region, the intact peridental membrane around the anterior teeth, thus eliminating the suspected teeth as the aetiological factor in the median line cyst. Cysts are more easily recognized in the edentulous jaw and may present a protuberance on the alveolar ridge and cause localized or referred pain in the anterior region of the maxilla due to nerve pressure internally from the cyst and externally from the denture.

Anterior Median Line Cysts for the most part have no connection with the anterior teeth and since the removal of these cysts via the palate is the method of procedure, it is seldom necessary to remove the teeth. A post-operative photograph of Case 2 showed no tooth colour change in ten months after enucleation. Cysts are enucleated from the palatal side generally without any undesirable post-operative results. The cavity formerly occupied by the cyst may fail entirely to

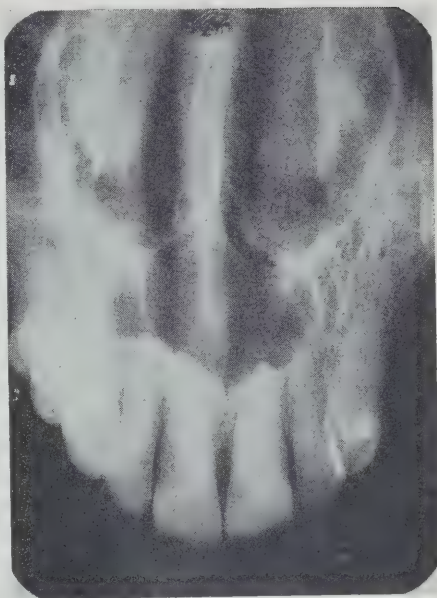


Figure 5.

Occlusal ray of case ten months after palatal enucleation of cyst. Note partial filling in of bone in cystic cavity and retention of all teeth.

fill with bone or may partially fill in as illustrated in Fig. 5.

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2. Stafne, E. C., "Supernumerary Upper Central Incisors." Dental Cosmos, 73; 976-980, October, 1931.
3. Stafne, E. C., Austin, L. T., Gardner, B. S.; "Median Anterior Maxillary Cysts." J.A.D.A., 23; 801-809, May, 1936.

Dental Broadcasts over Coast to Coast Network

On Friday, *March 14*, and Friday, *March 21*, there will be given two broadcasts on dental subjects of interest to the people of Canada. These broadcasts will be given under the auspices of the Canadian Dental Association and will be carried over the Canadian Broadcasting Corporation's network, from coast to coast, at 5.45 P.M., E.D.S.T. Will you please make these broadcasts as widely known as possible to your patients and friends.

A. E. HIGGINS,

Chairman, Dental Health Committee of C.D.A.

Ultraviolet Sterilization of Instruments

by W. SCOTT HAMILTON, D.D.S., Edmonton
Department of Dentistry, University of Alberta

BECAUSE of the appearance in dental offices of certain so-called "Ultraviolet Sterilizers", it would appear that the profession should be acquainted with the effect of these rays upon bacteria.

Like many sterilizing agents the great disadvantage is the length of time required to kill bacteria, and the uncertainty of results. As is the case with many commercial products, these sterilizers are accepted, on recommendation of salesmen, by altogether too great a number of the profession.

I am indebted to Dr. R. M. Shaw, Department of Bacteriology, University of Alberta, for the series of experiments which he conducted. His report is as follows:—

"Attached is a table of results of two series of experiments carried out to determine the sterilizing activity of the Ultraviolet Instrument Sterilizer.

Cultures used were freshly isolated staphylococcus pyogenes aureus, bacillus diphtheriae and stock cultures of bacillus typhi and bacillus subtilis. These cultures were smeared on slides and allowed to dry. Some slides, as indicated in the table were exposed to the light with the smears upwards, while others were turned down. Cultures were made on suitable media after removal from the sterilizer, and growths were identified to ensure that such were not contaminations but were the organisms under test.

In the case of those exposed for one hour in series No. 1, I was busy with other work and unable to make cultures immediately at the end of the hour exposure. These remained in the sterilizer for four hours after the light was turned off and were then cultured. This prob-

ably accounts for the difference in findings in the one hour exposures of series No. 1 and No. 2.

In all cases the light was turned on only when the smears were placed in the sterilizer. In the case of series No. 2, control smears were made at the same time and left, covered with Petri dish, beside the sterilizer for one and one-half hours before cultures were made. All showed good growths.

RESULT OF TESTS

SERIES NO. 1

Test No. 1—exposure 15 minutes.

	Direct rays	Indirect rays
B. diphtheriae	X	X
B. subtilis	X	X

Test No. 2—exposure 30 minutes.

Staph. py. aureus	—	—
B. typhi	—	X
B. diphtheriae	—	X

Test No. 3—exposure 1 hour.

Staph. py. aureus	—	—
B. typhi	—	—
B. diphtheriae	—	—

In test No. 3 the slides were left in the sterilizer for four hours after the current was turned off. (Compare with series No. 2 test No. 3.)

SERIES NO. 2

Test No. 1—exposure 15 minutes.

Staph. py. aureus	X	X*
B. Typhi	X	X
B. diphtheriae	X	X

*(Inhibited)

Test No. 2—exposure 30 minutes.

Staph. py. aureus	X*	—
B typhi	X	—
B. diphtheriae	X	X

*(Inhibited)

Ultraviolet Sterilization of Instruments

Test No. 3—exposure 1 hour.

Staph. py. aureus	—	—
B. typhi	—	X*
B. diphtheriae	X	X

*(Inhibited)

Test No. 4—exposure 1½ hours.

Staph. py. aureus	—	—
B. typhi	—	—
B. diphtheriae	X	—

Test No. 5—Control slides left at room temperature for 1½ hours and then cultured.

Staph. py. aureus	X	X**
B. typhi	X	X
B. diphtheriae	X	X

** (profuse growth)

(end of report)

From this it would appear that with an exposure of one and one-half hours the instruments might not be sterile. Even if they were the time is too long for practical application.

It must be stressed that in addition to the rays, the ozone which they produce is also a sterilizing agent. This is shown in Dr. Shaw's experiments, where he found that by turning off the current and allowing the smears to remain in the chamber for four hours, the bacteria were more effectively destroyed than where they were removed immediately.

The Wisconsin Alumni Research Foundation has carried out experiments in an attempt to sterilize milk by exposure to ultraviolet rays. They allowed the milk to flow over the tubes in a very thin layer, and thus the rays were con-

centrated. The results so far have not been satisfactory because of opaque substances in the milk which tend to protect the bacteria from the rays. Irregular surfaces on dental and other instruments would tend to give them the same protection. In connection with milk they further found that there developed a distinct unpleasant, flat taste, which was attributed to the release of sulphur. In a few places in the world this method has been used to sterilize water supplies, but there are few engineers who will accept it as entirely safe, and besides it is too expensive. The objection of chlorine in the water however, is overcome.

Details of the action of ultraviolet rays on various types of bacteria, under different circumstances are outlined in, "Disinfection and Sterilization," by McCullough, to whom I am indebted for information used in this article.

We must conclude, I think, that heat is still the most effective sterilizing agent at our disposal, steam pressure being most suitable for sponges and other materials which cannot be boiled. For those willing to make the investment, any of the autoclaves on the market make a very desirable piece of equipment for the dental office. Many, however, feel that the cost is too great. It is for these that I recommend the steam pressure-cooker, used in many homes. These are comparatively cheap to buy, are of sufficient capacity for any office, can be used on any stove and are as effective as the most expensive autoclave.

Conventions

WESTERN CANADA DENTAL SOCIETY, EDMONTON, ALBERTA, JUNE 2-4, 1941.

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.

Secretary, A. D. Richardson, 1240 Union Avenue, Montreal.

17TH ANNUAL SESSION OF AMERICAN DENTAL ASSISTANTS ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

General Secretary, Aileen M. Ferguson, 709 Centre Street, Jamaica Plain, Mass.

Practice Management

Some Ethical Problems In Office Practice

by WILLIAM B. DUNNING, D.D.S., F.A.C.D.

(Condensed from *Annals of Dentistry*, Vol. 7-1.)

MOST of the misunderstandings and troubles in human relationships may be straightened out by two standards of action—common sense, and the Golden Rule.

In the rough world of business, rules of conduct are robust, and defined along broad lines. A man is straight and his credit is A-1. In his daily comings and goings there is comfortable elasticity, provided he observes simple rules. There is nothing more sensitive, however, than commercial credit. It points to the man, as the compass points to the North. Walter Scott said, "Money is character"—and the late J. P. Morgan declared that in business "the first thing is character" . . . that it is rated "before money or anything else. Money cannot buy it."

The patient enters the office because of the favourable reputation of the dentist as a professional man. He is known to have technical ability, but with the intelligent patient many other factors influence his, and particularly *her* judgment before deciding to entrust her dental welfare to him. The dentist in question must be a gentleman in the broad and simple sense of that honourable designation. He must be sensitive and awake to the peculiarly intimate personal contact of himself with his patient, especially when of the opposite sex, which the nature of his work requires. In this official relationship he is made the repository of many confidences. It is his duty to receive them with under-

standing and sympathetic interest—and then be very sure they remain within his private mind. The principle was an old one when Hippocrates required that the honourable physician keep family secrets inviolate. His dress and everything relating to his bodily equipment must be meticulously tidy and above all, clean. He must keep his hands in good order—which in cold weather and frequent scrubbing, is not easy. Just at this point, be it remembered that next to his eyes, the operator's hands are his most precious possession.

While discussing these practical hints, let me say that it is my belief that no dentist should operate without eyeglasses—whether they be lenses or plain glass. The occasional tragic accident of serious eye infection caused by a flying particle from the patient's mouth, is sufficient reason for this precaution. The use of tobacco during his working day may be a habit which is still repulsive to some persons. I speak in this qualified way, for the ladies today are apt to be the worst offenders—yet there are many people who are sensitive to tobacco, and who are offended at the near approach of hands or breath laden with cigarette smoke. A word to the wise! Other personal indulgences, detectable by the patient, may be of even more serious import. It is well to remember that while the average patient knows little of the real excellence of your work, that same aver-

age patient is fairly clever at sizing you up as a man.

If it is clear that you are not only a competent dentist, but in addition a person of culture and of broad interests, the intelligent patient will conclude that such a practitioner will be wise in his judgments—that his view of his or her case will include all that should be considered, before making a decision. Here is one of the imponderables which cannot be overestimated as an element in the choice of professional service. Other things being satisfactory, the patient is much concerned as to the way in which he is handled. Has Dr. Smith a heavy hand? Of course he does good work, but does he hurt? There is no excuse today for that reputation. With the means now available, severe pain need not be inflicted by routine dentistry. A light and delicate touch is highly appreciated by most patients. A rough or impatient manner is inexcusable, and is one of the very best ways to induce the victim to seek another dentist.

The question of fees is a potential source of misunderstanding between the dentist and his patient. The reason is not far to seek. In the commercial world a commodity is sold for a price; market conditions determine the amount; the tag is on the article and the purchaser may take it or leave it. Professional services are rendered for a *fee*—but the determination of an equitable fee is by no means a simple matter. The human element in the problem makes the difference. It is frequently impossible to foresee the biological or mechanical exigencies which may arise in the treatment of a case. When they do become known, the wise choice of procedure will depend first upon the experience and insight of the operator, and therein the judgment of the eminent practitioner is more valuable than that of the recent graduate—quite apart from the question of their relative technical skill.

The economic status of the patient is to be considered. The choice of materials and the differences in skill demanded by each—the element of time in the selected procedure—these and unpredictable variants have a bearing on the estimation of the proper fee. Custom in each community has reduced the problem to its simplest terms; nevertheless there is often room for debate and misunderstanding, and the patient is entitled to a fairly clear indication of what his obligation shall be. Specialism involves readjustment of current fees, and is often a source of misunderstanding. It is also a common cause of that old cancer in professional relationships—the splitting of fees between the specialist and the general practitioner. A commission for value received is common in business—it is understood and not condemned, provided it does not in effect become a bribe. In professional life a commission for the reference of a patient falls quickly under that suspicion. In "The Citadel" by Dr. Cronin, a lurid picture is drawn of the logical consequence of a group of physicians playing into each other's hands in the reference of patients, thereby exploiting the public for private gain. Such abuses are now so thoroughly frowned upon by ethical practitioners that little need be said here, except to indicate an underlying principle by which to test certain allied problems. The suspicious element in the split fee is its secrecy. The patient pays a fee which is shared, unknown to him, by two men, one of whom has referred the other. It may be all right—but why should a self-respecting practitioner be paid for the mere act of referring a patient to a colleague who possesses special skill? If, however, he is so paid, the question arises—was the reference of that patient a wholly disinterested act? The fact that the transaction is kept quiet, is apt to confirm a reasonable doubt. If the welfare of the patient were the sole consideration, this damning sus-

picion could be avoided by both men. If both practitioners have rendered service, each may properly send his own bill. The private understanding is the hinge of the trouble, and the transaction is justly rated as "shady."

The ethical relationship of one dentist to another is brought out most clearly, perhaps, in the reference of patients for consultation or in rendering emergency treatment to the patient of a colleague. As for consultation, we dentists have been too reluctant to use an obvious means of obtaining valuable help in difficult cases. The physician, with a case involving the alternatives of life or death, is quick to seek another opinion; he has been trained in the idea that such is his duty. Perhaps the lack of urgency in most dental cases may account for the fact that dentists seldom consult. It is a habit of practice we should cultivate, where serious problems are involved. We should study the well organized technique of consultation which has been formulated by generations of medical practice. While we may not have reason to exercise all the punctilious requirements of the medical code, certain acts of courtesy will never be amiss. One of these is to write your opinion fully and at once to the dentist who has requested it. It will not do to tell the patient what you think: it will not do (except in emergency) to telephone what you think. Your colleague is entitled to your written opinion. A routine consulting charge should be made, except where contraindicated by personal or special reasons.

In doing any emergency work for the patient of a fellow practitioner, one must remember the extreme delicacy of his position. In general, it is well to make the simplest possible repairs, with instructions to the patient to see his own dentist at the earliest opportunity. If a filling has failed, if new caries is discovered, we must make all secure, but otherwise the

less said the better. In the enthusiasm of youthful thoroughness, a very casual and ill-considered remark concerning the state of that cavity may have a serious effect in the confidence the patient has felt for his own dentist. We all live in glass houses. In the long run we all are guilty of missing defects which should have been seen. We can but do our best, with ample charity for the efforts of others. By this I do not mean we should condone gross neglect; that is a totally different matter, and a proper subject for the Committee on Ethics or Grievance.

Patients are constantly shifting from one office to another. This is natural and inevitable—in fact, if it were not so, some of us would go hungry! We do not own our patients; they may go where they will; but we shall do well to be very cautious in accepting the patient of a neighbouring dentist on the mere whim of that patient. Remember, that except for the relief of acute suffering, we are under no obligation to accept a case for regular treatment, where we have reason to decline. One such reason would be the possible fact that the patient was referred to you originally by her dentist for your opinion. If you thereby betray your colleague's confidence in you, there is an end at once to professional consultation. There are border line cases, however, where there are good reasons for the patient's desire to make a change. In the event of a deadlock of opinion or sentiments, it is well to lay hold of that dilemma by having a straight talk with the previous dentist.

In a paper of this sort it is not feasible to discuss more than a few of the ethical aspects of dental practice and of the delicate and important relationships of the dentist to his profession. Fortunately most of these matters may be reduced to simple terms by good will, good taste, and that universal solvent, Common Sense.—*Jour. Michigan State D. Soc.*

Problems in Practice

Our readers are invited to send in their problems in practice to the editorial office, 314 Somerset Building, Winnipeg. These questions will be submitted to prominent dental authorities and their replies sent to the one asking the question. The more interesting subjects will be published in this section of the Journal over the author's name unless otherwise requested.

THE PREVENTION OF ENDOCARDITIS

by F. G. ALLISON, B.A., M.D. (Man.),
M.R.C.P. (Lond.)

Subacute Bacterial Endocarditis is one of the most inexorable diseases the physician has to face. Once the streptococcus viridans is established on the endocardium it is almost a miracle if any serotherapy or Dagenan and Heparin treatment is able to dislodge it. The doctor tries one futile expedient after another, and watches his patient become weaker and paler and more toxic each day, until death comes as a release to the sufferer.

But if every patient with rheumatic or congenital heart disease is warned of the danger of tooth extraction the incidence of this infection would be materially reduced. It is not generally appreciated that extraction of teeth causes a transitory streptococcus viridans bacteriemia in a very high percentage of normal persons.

The best way for a rheumatic or congenital heart disease patient to avoid this danger is regular dental care, so that extractions are not necessary. If an extraction must be done a large dose of Dagenan should be administered about three hours beforehand. The tooth socket should be treated immediately with 95% carbolic acid, followed at once by alcohol.

Dr. F. T. Cadham, Professor of Bacteriology in the University of Manitoba, is of the opinion that immunization by a streptococcus viridans vaccine would diminish the risk of the development of subacute bacterial endocarditis in patients with rheumatic or congenital heart

disease.— *Editorial in Manitoba Medical Review, October, 1940.*

EDITOR'S NOTE:—*That the dentist is faced with a serious problem in extracting teeth for a patient with rheumatic or congenital heart disease is undoubtedly true. There is, however, a considerable difference of opinion as to the most satisfactory methods to use in extracting teeth in order to avoid the possibility of causing subacute endocarditis.*

The above editorial, with the consent of the author, was submitted to a number of leaders in this field for their comment and the replies appear on the following pages.

REPLY FROM U.S.A.:

The problem of the development of subacute bacterial endocarditis, particularly in its relationship to dental extraction has interested us for many years. We have all seen a goodly number of cases where this trend of events has occurred. It must be borne in mind that subacute bacterial endocarditis never attacks the normal heart and this fact to some extent limits the possibility of the occurrence of this complication. It is with this idea in mind that we are very cautious in advising dental extraction where badly infected teeth are present and where a healed rheumatic valvular defect or a congenital lesion is present. However, there is no method that I know of when extraction is necessary as it is, of course, many times, to prevent this hazard. For-

tunately the incidence in relationship to the large number of extractions performed under these circumstances is small.—*Dr. F. A. Willius, Head of the Section on Cardiology, Mayo Clinic, Rochester, Minn.*

REPLY FROM U.S.A.:

I believe that this editorial vastly over-emphasizes the matter of tooth extraction as a cause of subacute bacterial endocarditis. Speaking from personal experience only, I have yet to see my first case of a flare up of any kind following the removal of teeth from a patient with a rheumatic or congenital type of heart lesion.

I thoroughly agree that the extraction of some diseased teeth does cause a transitory streptococcus viridans bacteriemia in a *limited* number of normal persons but one should most certainly differentiate a bacteriemia from a septicemia, two conditions which are entirely different. Certainly the finding in a normal mouth of Vincent's spirochete and the fusiform bacillus does not constitute an active case of necrotic gingivitis.

The present conception of proper treatment in routine cases is to flood the socket, immediately after the tooth has been removed, with a reliable germicide, such as, Tincture of Metaphen or Merthiolate or Mercresin.

As a general prophylactic measure, if I were to remove diseased teeth from a patient suffering from rheumatic or congenital heart disease, I would advise sulphanylmid grains XXX each day for four days preceding the extractions and would continue with slightly increased doses (grs. XL) for three days following.

While I feel that we should attempt at all times to abort incipient disease, the method advised is unnecessarily radical, and will lead to delayed healing.—*George W. Christiansen, Detroit, Mich., Presi-*

dent, American Society of Oral Surgeons and Exodontists.

REPLY FROM ALBERTA:

The importance of special care in the extraction of teeth for patients with defective endocardium and heart valves is well emphasized in this editorial. From various sources I gather the impression that fully two per cent of the adult population of Canada is so affected. In the aggregate, they represent a large number, and when it is remembered that each has a large number of extractions over a period of years, it is obvious that the average dentist operates on these patients more frequently than he realizes.

As it is well pointed out, there is an ever constant danger of serious results following from simple operations. One of the difficulties is that the dentist is not always aware of the existence of the condition. In known cases he should keep in mind the serious consequences which may ensue, and use a technique which will reduce to a minimum the flooding of bacteria into the blood stream.

The writer of this editorial assumes, and I believe quite correctly, that regardless of the risk, it is advisable to remove the dental foci of infection in the majority of these patients. In known cases such action by the dentist should be taken after consultation with and on the advice and responsibility of the physician in charge of the patient.

An examination of the literature shows that streptococcal organisms are invariably responsible for bacterial endocarditis, in the majority of cases infecting an already injured endocardium. It is also recognized that with few exceptions streptococci are only present in the individual in the upper respiratory passages and mouth. Dental foci of infection in devitalized teeth, and the much more common and often more important foci of

pyorrheal teeth are almost invariably streptococcal.

Round, Kirkpatrick and Hails¹ state that hard chewing on pyorrheal teeth, at times, forces bacteria into the blood stream, and that the constant absorption of toxins from these areas renders the patient more susceptible to the seating of the infection.

On the basis of these facts it is evident that for these patients the removal of dental foci of infection is important. It is obvious also that the removal of these sources of infection should be done with as little flooding of the blood stream with bacteria and toxins as possible.

Okell and Elliott² have established "that a few minutes after a pyorrheal tooth is extracted there is a definite bacteriemia, lasting for a few minutes to a few hours."

Peterson and Nedzel³ in their experimental work on dogs, have shown that blood pressure increase produces a "permeable or sticky" condition of the injured valves of the left side of the heart which makes them susceptible to the accumulation of bacteria moving through the blood stream.

In cases of marked temporary or permanent lowered resistance it is essential, therefore, that these patients should be in bed at home or in the hospital for some hours before and after the extraction. The operation should be done in a prone position and with as little movement of the patient as possible.

Raising the health level of the mouth where necessary and possibly the health level of the patient, before commencing the extraction of the teeth has preventive value. At the time of extraction a general cleaning of the mouth and a careful cleansing of the gingival crevice are desirable. Where there is infection of the soft tissues around the tooth, the danger of forcing bacteria into the blood stream by local anaesthetic pressure is obvious, and

is to be avoided.

In cases of multiple extraction it is important that only one tooth should be removed at the first appointment, and one of the least infected should be chosen. A careful check on the effects in the following two or three days will determine when the next step may best be taken. Elevations of temperature should be noted. Single rooted teeth, and those multirooted ones with extensive alveolar absorption which can be removed without heavy luxation impinging on the bone, should produce relatively little bacteriemia.

The extraction of very firmly held anterior teeth and solidly fixed multirooted teeth is a much more difficult problem. It seems evident that a judicious removal of bone to allow the extraction of the teeth without the tremendous luxating pressure so often otherwise necessary, will produce much less immediate introduction of bacteria to the blood stream. There will also be much less cracked and bruised bone with its nutrient canals occluded.

The value of a cauterant and germicide such as carbolic acid swabbed into the socket seems to me questionable. Wilfred Fish states that immediate careful and complete cauterization of gingival tissue and pockets before extraction prevented bacteriemia in most cases. He also says that the direct push in luxating teeth forces the bacteria into the capillaries. It is obvious that before the phenol is applied the bacteria are already in the blood stream, and phenol is a markedly self-limiting cauterant which destroys tissue only superficially.

It has also been stated by Fish that under conditions without pressure only the toxins and not the bacteria enter the blood stream from the areas around infected teeth. With the outflow of blood which follows extraction, it does not seem likely that the organisms continue gaining entrance from the superficial layer, which the phenol would cauterize, after

the surgery is completed. If this is correct the use of this drug has no value, and there is a destructive influence on the surface cells which is undesirable.

General accepted practice in the opening of boils is to use no caustic germicide. A more analagous operation with very similar conditions of infection is the removal of tonsils. Here it is also general accepted practice to leave the open bleeding area without the application of such drugs.

The writer is not competent to express an opinion on the value of Dagenan or sulphanilamide or other types of drugs though there is reason to suppose they would have a very useful preventive effect. At present it is not proven. It is necessary to accumulate the drug by considerable doses to a definite level in the blood at the time of the extraction to obtain the most favourable result. There is also to be considered the disadvantage of nausea and other disturbances in a large percentage of cases.

By raising the level of resistance of the patient and taking advantage of all means to reduce the spread of bacteria to the blood stream, the chances of seeding a streptococcal infection in the endocardium of the patient can be greatly lessened. The extent of precaution taken beyond that of usual extraction technique will be governed by the special needs of the patient. When dealing with patients already affected by subacute bacterial endocarditis every small advantage should be taken.

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2. Okell C.C., and Elliott S.D. *Lancet* 1935 ii, 869.
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—John W. Clay, Calgary.

REPLY FROM ONTARIO:

The unpleasant and disturbing fact that patients sometimes suffer transient bacte-

riemia following tooth extraction was first drawn to my attention by the work of Okell and Elliott in 1935. The problem has been investigated by others since that time, and we ourselves have done a limited amount, in conjunction with the Banting Institute.

Although this knowledge is new to us, we should remember that the condition is no recent innovation, and has probably occurred in patients since the dawn of time. Also, one series of patients showed almost eleven percent to have a bacteriemia prior to operation. Dr. Wallace Graham has been able to produce a transient bacteriemia in patients with periodontoclasia by having the patient chew wax, and it would seem that many of these cases have a "physiologic leak" of organisms into the blood stream with a defensive mechanism adequate to care for them. Okell and Elliott reported one series in which 75% of the patients suffered a bacteriemia following extraction, but all were sterile ten minutes after. Certain it is that no dentist or physician drew our attention to a relationship between tooth extraction and subacute bacterial endocarditis prior to the microscopic findings. Such a thing is certainly possible, but fortunately is seldom an actual clinical reality. In our own Clinic, we know of not a single case where our extraction has precipitated a crisis in patients with congenital or rheumatic heart disease, and inquiry at two of our hospitals has failed to reveal any noted relationship between their subacute endocarditis cases and dental extraction, although the records were admittedly not kept for that purpose.

Might I say that the recent abstract in the J.C.D.A. of the report of Palmer and Kemp from the J.M.A. per the Dental Digest misquotes the original article and is misleading. The original article does not state that in four cases septic symptoms followed "dental extraction", but

rather, "dental manipulation". Of the four, two had extractions performed, one had a root canal filled and one had periodontal treatment. Coincidence is a factor that cannot altogether be ruled out.

At the present time our knowledge is too limited and the reports too much at variance to permit anyone to speak with definiteness on this problem. We should remember that it is the duty of the physician rather than the dentist to diagnose and treat cardiac conditions, and I do not believe that internal medication of cardiac patients by the dentist, is warranted. Dagenan, although effective against strept. haemolyticus, in general has been a failure against strept. viridans, and I personally question the wisdom of administering this drug, with the possible attending upset, to all cardiac cases prior to extraction. I also feel that the physician has had scant success in the control of strept. viridans with strept. vaccines and that the routine use of vaccine in cardiac cases is unjustifiable.

Many investigators feel that the damage is done by the first flood of bacteria that enters the blood before the defensive mechanism can become operative. This first flush of bacteria would occur in most cases with the insertion of the beaks of the forceps into the gingival crevice, or at the first rocking of the tooth. After the tooth is removed, it is too late to attempt to prevent ingress of bacteria by cautery with phenol. Sterilization of the gingival crevice before instrumentation is, in my opinion, more valuable.

Since the danger of inciting a crisis in certain cardiac cases is very real, the problem of how best to care for these patients is indeed a vexed one. Regular dental care and good oral hygiene so that the patient will need no extractions should be our constant goal. We work in closest conjunction with the physician in these cases and strive for oral cleanliness prior to operation. Just before operating we

employ lavage with Dakin's solution routinely and the amount of surgery performed at one time is rigidly limited. Latterly, I have been paying more attention to the gingival crevice. The area is isolated, dried, and the crevice flooded with metaphen or iodine. In some cases we prefer to operate with the patient in bed and have him remain there for a day or two after.

More light on this problem is an immediate necessity. In the meantime let us remember that the line between rational therapy and unwarranted empiricism may at times be very finely drawn. *J. H. Johnson, Toronto, Associate-Professor of Dental Surgery and Anaesthesia in the Faculty of Dentistry, University of Toronto.*

REPLY FROM ONTARIO:

Co-operation between the physician and the dentist is an essential requisite in the evaluation of the risk involved in the removal of dental foci. This fact is especially true in cases of cardiac disease. The patient's physician may offer invaluable aid in the guidance of:

- (1) Number of infected foci to be removed at one time.
- (2) Type and quantity of premedication.
- (3) Type of anaesthesia.
- (4) Post-operative medication and treatment.

In general it may be said that the amount of foci to be removed at one time depends entirely on the seriousness and stage of the involved heart disease plus dental roentgenological and clinical evidence of the degree of dental foci present.

Generally the first sitting is limited to the removal of some foci that is not difficult. This procedure is necessary to determine the patient tolerance. It is always wise to limit the extraction of the teeth to one quadrant.

The type of premedication suggested by the majority of physicians is that of a

barbiturate, the most commonly used derivative being Nembutal, grains $1\frac{1}{2}$ given one-half hour prior to surgery.

The use of sulphanilamide derivatives pre-operatively sounds like good theory. Personally, we have not to date used it for this purpose. We would, however, question the value of Dagenan in large doses administered only three hours before extraction. We note that no mention as to the size (number of grains) in the large dose is suggested. It is generally accepted that the blood is sterilized by Dagenan only after twenty-four hours of treatment, the drug being given in doses of 30 grains every four hours. Dagenan has a tendency to nauseate the patient which would somewhat complicate willingness on the part of the patient to undergo dental extractions. Then again, it is accepted knowledge that while Dagenan is specific for the majority of streptococci it has a markedly reduced action on the viridans type which it is believed is the chief form of streptococcus encountered in subacute bacterial endocarditis.

The anaesthesia of choice in all heart disease is that of Novocaine, 2 per cent with a reduced adrenalin content. Waites Novocaine — Procaine — Cobefrin has been found most satisfactory in a few cases operated upon to date.

The patient should be operated upon when possible in a reclining position and should be allowed to remain in a resting position for some hours. For this reason it is sometimes advisable to hospitalize the more advanced cases of heart disease requiring dental extractions.

We cannot entirely agree with Dr. Cadham that streptococcus viridans vaccine used pre-operatively is of benefit, since medical literature on the subject does not come to the conclusion that vaccines of this type are of sufficient benefit to warrant their use.

In regard to the socket treatment of 95 per cent carbolic acid followed by alco-

hol, I believe this to be for the most part theoretical. The method of application would certainly be a problem. It is a question in my mind whether or not such a concentrated solution would not do considerable damage to the investing tooth socket and soft tissue membrane, certainly we would hesitate to subscribe to this method of treatment without considerable animal experimentation warranting its use in sockets of infected teeth.

Aspirin, grains 5 and Codeine, grains $\frac{1}{2}$ in combination or Aspirin, grains 5 alone if codeine has had previous nauseating effect on the patient, is given post-operatively for pain.

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—George A. Morgan, Toronto,
Exodontist.

The Forum

• AN ORIGINAL INDUSTRIAL DENTAL SERVICE

AN ANALYSIS OF FOUR YEARS' WORK
by JOSHUA LEVI, L.D.S., Eng.

(Condensed from *British Dental Journal*)

THE following is an analysis of the work done by a number of dental surgeons for employees of Messrs. Marks & Spencer Limited, under their Dental Welfare Scheme.

The dental surgeons, who numbered 26 in 1939, were all carefully selected for their ability, conscientiousness and enthusiasm; they work under strictly enforced conditions in which are embodied certain principles unique in industrial dental service which could, in my opinion, be widely adopted with great advantage. Their value has been proved over a period of nearly five years.

Each dentist works in his own surgery using all his own equipment, instruments, and materials, with the exception of denture materials, these being supplied by a central workshop. He is paid by the hour, and sees one patient each half-hour, giving these "session patients" the same care and consideration that he gives to his fee-paying patients.

Supervision, which is necessary, is by the periodic inspection of patients and records, and it has been observed that a remarkably high standard of work is maintained, due in part at least, it is suggested, to the congenial conditions of work, which allow each dentist freely to exercise his professional skill and ability for the benefit of these "session patients" without any interference from economic or any other causes. It may be of particular interest to note that there is no insistence on returns of work being kept at a certain level, and although a monthly

summary of treatment was required during the early years of this scheme, it was found to serve no useful purpose and has now been discarded.

A factor of importance in the consideration of dental practice is the amount of productive work a dentist is able to do in any given time. Using the records for 1939, it has been found possible to calculate the amount of work done by each of our dentists. It was found convenient to use a time basis of 100 half-hours, representing 100 appointments, and fillings, extractions and scalings only, were recorded. It must be understood, however, that other treatment, such as the making of dentures, was carried out at the same time.

The averages are very similar, and have remained remarkably constant for four years. With regard to the individual records, a very considerable difference is apparent between the relative proportions as well as the amounts of the three kinds of treatment recorded above. The number of fillings, for example, varies from 90.8 per 100 half-hours in one area to 30 in another, compared with an average of 57.4 for the year in question. Extractions vary from 73.1 to 7.8, the average being 34.7, and scalings from 32.5 to 3.5, with an average of 15.7.

These variations are so striking that I think some attempt at explanation is necessary. I would hazard the opinion, borne out by numerous inspections, that it is not to any extent due to variation in the dental condition of the mouths treated. If this is so, the important factors determining these figures must be found in the relative speed of the dentist, which in turn depends on the efficient organization of his practice and his manual dex-

terity; but the slow and painstaking practitioner would show the same low figures as would the lazy and slovenly one, whereas the pinhole cavity fiend's figures would be as high as those of the hardest working and most conscientious of dentists.

It is thus impossible to assess a dentist's work by taking into consideration merely a set of figures purporting to show the amount he has done; it is also necessary in every case to find out the quality of this work, which can only be done by inspection.

To sum up, I would suggest that the figures given above show that good conservative dentistry can successfully be practised among some, at least, of the industrial population, so long as it is associated with a really active and benevolent interest on the part of some organization, in this case the employer, and an enthusiasm on the part of the participating dentists, unhampered by financial considerations.

• WOUNDS IN MODERN WAR

by J. EASTMAN SHEEHAN, M.D., New York.

(Condensed from the Medical Record.)

PLANNING for medical defense will naturally include the care of the wounded. War wounds are in a class by themselves, and modern war produces wounds in such numbers that the problem of how best to give them attention becomes one of great magnitude for which special hospital measures should be planned.

There is a difference between what happens in warfare on the field and what happens when a town is bombarded from the air.

Disposition of the wounded differs in the two instances. In the town the wounded are taken to existing hospitals. In the field there may be a long delay before the wounded can be reached and there is no nearby hospital to which to

take them. In the case that came under my own observation, the Spanish conflict arose so quickly and developed so fast, that no provision had been made for the wounded. They were placed out of range of further injury in caves behind the lines, to await attention when it could be brought to them. This had at least the negative value of demonstrating that every other consideration must give way before the imperative necessity of immediately grappling with the problem of infection on the spot.

I had the good fortune of having had experience with sulfanilamide, and had some with me. We had it made up for distribution at the front in paraffin paper packets of 15 to 25 grs. This was blown in on all surface and most cavity wounds. Only a light covering was applied. It proved wonderfully effective, even under the most unfavourable conditions. There was notable easing of pain and reduction of mortality, even with those who had been left a long time in the caves. It conduced to granulation and to healing more quickly than any of the more familiar expedients.

Blowing the powder upon a surface wound or open cavity is not, of course, a device that serves in all cases. With an irregular wound it is much better to mix it with paraffin oil and apply with lint to the wound surfaces. Mouth wounds were lightly packed with lint carrying the oil mixture. In the presence of general infection, sulfanilamide was also given by mouth or by injection.

Specialized Hospital Units Needed: War hospitals should be essentially emergency institutions, and should be organized into small units, available for rapid movement and assembly. The distribution of patients to such hospitals would be determined, in all likelihood, with a view to recruiting direction and faculty specially effective in orthopedic, abdominal, thoracic, or other orders of

surgery. Personally, I advocate one grouping which includes war plastic and orthopedic surgery, a more than ordinarily equipped dental service imperative in face repair, and an adjacent organization for provision of artificial limbs.—*Dentistry a Digest of Practice.*

• TRIGEMINAL NEURALGIA

by DONALD MUNRO, M.D., F.A.C.S.,

Boston, Mass.

Conclusions of Paper

1. The pathology of true trigeminal neuralgia is unknown.

2. The presence of trigeminal neuralgia as the cause of attacks of facial pain can be diagnosed when (a) there are no objective signs of local disease, (b) the distribution of the pain is limited strictly to all or part of the peripheral field of one fifth nerve only and is usually but not always intermittent, (c) there is a "trigger point," (d) the pain must have never crossed the midline of the face.

3. Temporary relief from the pain of true trigeminal neuralgia may be obtained rarely by the inhalation of trichlorethylene, and always by the injection of alcohol into one or both of the mandibular and maxillary branches of the Gasserian ganglion providing the nerve can be reached, and of the supra and infra-orbital branches of the ophthalmic branch.

4. Permanent relief from the pain of true trigeminal neuralgia may be obtained by total or differential operative section of the sensory root posterior to the Gasserian ganglion.

5. Operative section of the sensory root may be done:

(a) In the pons. This method is as yet only experimental.

(b) In the cerebello-pontine angle. This method should be reserved for cases in which the diagnosis is in doubt

or in which multiple cranial nerve sections are desirable as for example, in cancer of the face, mouth and throat.

(c) In the temporal fossa. This method is the classical method. If a differential section is done, pain is relieved, complications are reduced to a minimum, and the eye is not endangered.

6. There is no contraindication in age or length of time the disease has been present to the operative therapy of trigeminal neuralgia.

7. Greater advantage of the possibilities of neurosurgery as an aid to early and more efficient treatment of cancer of the mouth, face and tongue, should be taken by both the dentist and the general surgeon.—*The Apollonian.*

• ANAESTHESIA AND IMMEDIATE EXTRACTION IN THE PRESENCE OF SWELLINGS OF THE JAWS

by J. WAINWRIGHT, B.D. Sc., Queensland
Australia

SUMMARY OF PAPER

IMMEDIATE extractions with swellings are indicated in all cases except with epitheliomata, sarcomata, purpura-haemorrhagica, leukaemia, etc. The ideal method of anaesthesia is the use of nitrous oxide, and if this is not available ethyl chloride, used locally, is very efficacious.

Local anaesthesia (block with Borocaine) has its uses and if used without adrenaline will be found to be very efficacious. However, the operator must study carefully the technique and not expect the impossible.

When removing teeth with swellings present, it is wise to remember that one is eliminating the causative factor and pain, also establishing drainage. Furthermore the patient will be able to eat, sleep better and consequently raise his resistance.—*D. Items of Interest.*

• YOU MUST RELAX

THE benefits to be gained from frequent periods of relaxation are by no means fully appreciated by the majority of people. To lie down for a few minutes after lunch and relax, even though we do not actually lose consciousness, will drop the blood pressure and pulse rate, remove the feeling of being rushed or harassed, and fit the individual for his afternoon's work to an extent considerably out of proportion to the time expended for the purpose.—Smiley, Dean Franklin, and Gould, Adrian Gordon: *A College Textbook of Hygiene*, New York, Macmillan Company, 1940, as quoted in the *Journal of the American Medical Association*, per *Dentistry a Digest of Practice*.

• A TOOTH FOR AN EYE

THAT an infection resident in one part of the body can play havoc with some other organ while in itself exhibiting little or no local manifestation has been the subject of much controversy in our medical literature. The champions of focal infection are equalled by their antagonists—and fortunately so—since like the tide, the neap is reached only when the flood and ebb have run their course. However, to the practitioner of general medicine—he who must minister to all ailments—scientific discussions are of value only when some concrete, practical, and readily applicable form of therapy enables him to better serve his community.

In a paper by Lebensohn,¹ which has the intriguing title of "An Eye for a Tooth, or a Tooth for an Eye," there is set forth for all of us a concise estimation of the role that dental infections play in the production of ophthalmic diseases that may threaten loss of vision. All parts

of the eye, uvea, cornea, conjunctiva, sclera and the optic nerve itself, have been affected by latent foci of infection located in the dental tissues. That this interrelationship is so readily determined is probably due to the fact that patients with ocular symptoms present themselves for medical care much earlier than sufferers from other ailments. The presence of an unsuspected periapical infection, located in the osseous tissue which allows of no local expansion, may reveal itself in the form of a serious ophthalmic disease through a spread via the lymph and blood streams.

In all inflammatory diseases of the eye, with certain obvious exceptions, the doctor must be on the lookout for dental sepsis. Devitalized teeth, stumps, periodontitis, and vital pulps that are undergoing degeneration must be ferreted out, since in themselves they give no trouble to the patient until acute pain sets in. As Lebensohn aptly puts it: "Artificial teeth function, but not artificial eyes."—*N. Y. Jrl. of Medicine: 11-15-40. A.D.A. Release.*

• FOCAL INFECTION

A REVIEW of the case against routine extraction of teeth and tonsillectomy for the purpose of preventing or curing systemic disease shows that the experience of twenty-five years has not justified the practice in the minds of many who have given the matter careful thought. The reasons advanced in favour of the procedure lack controlled clinical and experimental support. By comparing the occasional benefit obtained with the dangers incident to operation, one is led to recommend the procedure only in exceptional cases when evidence of actual local disease is present and its relation to remote or systemic disease probable.

If abscess or chronic infection around a tooth is present with reasonable certainty

1. Lebensohn, J. E.: *Illinois M.J.* 78: 174 (Aug.) 1940.

or if the tonsils are actually infected and give rise to repeated attacks of illness, there is no question that surgical measures are necessary in treatment of the local condition. But, in the light of present knowledge, the removal of such local infections in the hope of influencing remote or general symptoms and disease must still be regarded as an experimental procedure not devoid of hazard.

It may be said, therefore, that: (a) The theory of focal infection, in the sense of the term used here, has not been proved, (b) the infectious agents involved are unknown, (c) large groups of persons whose tonsils are present are no worse than those whose tonsils are out, (d) patients whose teeth or tonsils are removed often continue to suffer from the original disease for which they were removed, (e) beneficial effects can seldom be ascribed to surgical procedures alone, (f) beneficial effects which occasionally occur after surgical measures are often outweighed by harmful effects or no effect at all, and (g) many suggestive foci of infection heal after recovery from systemic disease, or when the general health is improved with hygienic and dietary measures.—Reimann, H.A. and Havens, W.P. Focal Infection, *J.A.M.A.*, 114:6 (Jan. 6) 1940, *per Bul. of the Chi. D. Soc.*

• PERIODONTAL DISEASE

FIFTY per cent of the world's lost teeth are lost because disease of the gums makes their extraction necessary, Dr. Olin Kirkland of Montgomery, Ala. stated at the centennial convention of the American Dental Association in Cleveland.

"Extractions are commonly thought of as being made necessary from decay of the teeth themselves, whereas in only half the cases is this true."

Conquest of both diseases, through increased research and development of tech-

nical skill, he said, is dentistry's principal task and one of "tremendous importance to both the dental profession and the general public."

Disease of the gums, Dr. Kirkland said, is most common in adult life and shares with caries equal responsibility in providing the world with dental cripples. As in the case of caries, he went on, the cause of gum disease is not definitely known.

"However," he added, "it is commonly known that it can be cured through treatment directed at its local symptoms, therefore it must be assumed that its most important aetiological factors"—that is, its causes—"are of local origin."

Disease of the gums, besides having destructive influence on the supporting structures of the teeth, also has serious results on the rest of the system and on the general health, Dr. Kirkland said.

Pioneers in modern dentistry have broken down many of the barriers that formerly stood in the way of successful management of this disease, he concluded, and it can today be handled with the same degree of success as other dental problems.—*A. D. A. Release.*

• ASPIRIN AS A GARGLE OR MOUTH WASH

Recently this has come into some favour especially in sore throats and after tonsillectomy, its local analgesic properties being of some assistance to the patient. Dr. D. B. Dott attacks its use and in an article in the *Edinburgh Medical Journal* he records some experiments which he has made as to the action of acetyl-salicylic acid on the teeth. He utters a strong warning against its use as a mouth wash as he felt that he had demonstrated that a solution of 5 grains of aspirin in one ounce of water at a temperature of 140°F. had a distinct decalcifying action on human teeth.—*D. Record*, Jan., 1941.

Can You Stand Alone?

Try it; close your eyes, hold your arms straight down to your body, feet close together. Ask someone to watch, and they will tell you that you sway from side to side. You can't stand alone, steadily, unless you can see your surroundings—what is above and what below; also, what is on each side. You must have these aids.

To enlarge upon this, can a professional man stand alone? No, he must depend upon his teachers, his confrères, his society affiliations, etc.

Sit down and consider how much you depend upon someone else, to help you in your profession. Think of the assistance you receive from the research worker, the scientist, and other experts in the various branches of dentistry.

Fortunately, you do not have to stand alone. As a member of the Canadian Dental Association you have the support on all sides of other Canadian dentists; they help you to stand, and you are helping them.

But there is need for more adequate support for your national association. Provided with greater support your national body can function more efficiently. Talk it over with your confrères. Discuss it in your local society. United we stand.

Issued by Committee on National Dental Progress.



PRINCE EDWARD ISLAND



Editor — M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

SASKATCHEWAN



D. T. Wray, Charlottetown

NOVA SCOTIA



S. G. Ritchie, Halifax

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

ALBERTA



John Clay, Calgary

MANITOBA



J. F. Morrison, Winnipeg

NEW BRUNSWICK



Harry H. Peters, Saint John

BRITISH COLUMBIA



J. S. Bricker, Vancouver

Subacute Bacterial Endocarditis

In this issue of the Journal there appears, in the Problems in Practice Section, several very interesting discussions, by leaders in our professional life, on the question of extracting teeth for patients with a rheumatic or congenital heart lesion. Fortunately, as has been pointed out, this problem does not arise in patients with a normal heart. In many cases the dentist may not know of the existence of any cardiac disease, but when he does, it is imperative that he use every care known to science to prevent serious consequences. Patients have a right to expect this service.

Of course, all well-known procedures for the care of such patients during extraction should be followed, and, as a rule, only one tooth or, at most, teeth in one quadrant of the mouth, should be removed at one sitting. Close co-operation with the patient's physician is also an obvious necessity. In the opinion of the writer, however, the essential procedure, which has been referred to in this discussion, is the thorough sterilization of the gingival crevice before extraction is undertaken.

In the September 15, 1936, issue of the British Dental Journal, Dr. E.

Wilfred Fish, of London, points out that the vast majority of teeth which are extracted have a definite mass of soft granulation tissue at the gum margin with a heavily infected periodontal sulcus, and concludes from a series of experiments that organisms are pumped into the tissues by the rocking of the tooth during extraction. As a result streptococci and a variety of other organisms may be grown from smears taken from roots of extracted teeth even though such teeth have vital pulps; but that even in cases of advanced pyorrhea the teeth, if extracted in a particular way, were found to have sterile roots and apices. This method is to cauterize the gingival crevice or pyorrhea pocket before extracting. Fish states that during the six months period previous to the writing of this paper that two fatal cases of malignant endocarditis following tooth extractions in patients with mitral disease had been reported to him.

In a paper appearing in the May, 1939, edition of the *Journal of the American Dental Association*, Fish again points out that the blood is sterile prior to extraction but that the act of extraction produces a transient bacteriemia caused by the pumping of organisms into the blood-stream from the pyorrhea pocket during the operation. To overcome this he passes a red hot electric cautery around the gingival sulcus and to the depth of any pyorrhea pocket in order to kill every organism present. By cauterizing the pockets in this way Fish states that workers were reducing the figure of 100 per cent of roots showing infection after extraction in pyorrheal teeth to about 20 per cent of all cases attempted. Moreover, in a number of cases the results were checked by showing that when the pockets were sterilized there was no bacteriemia following tooth extraction.

If these organisms are forced into the blood-stream, as Fish has pointed out, by the pressure of the forceps, conclusions arrived at after many careful tests, then it is useless to expect results from any sterilization of the socket after the tooth has been extracted. It would seem that the logical procedure, in these cases, would be to sterilize the gingival sulcus or pyorrhea pocket thoroughly before attempting extraction and so prevent, as far as possible, these organisms reaching the blood-stream.

Okell and Elliot found a transient bacteriemia in 10.9 per cent of pyorrhea patients even before extraction. They point out, also in the *Lancet* article of 1935, that the risk of escape of organisms into the blood-stream from an apical lesion is not so great as from a pyorrhea pocket, since the former lesion is less liable to mechanical interference unless the tooth is loose or the root canal open, and that, therefore, an infected dead tooth is less dangerous than infected periodontal sulci.

Fish also takes the position that if the surface condition be left untreated there is a very much greater area of toxic absorption from periodontoclasia than there is from the apical canals of a few infected dead teeth. If a patient has a damaged heart valve, a kidney or a tubercular focus, the danger of implanting these organisms in the weakened tissue is evident.

In the case of all those who have cardiac lesions it is of the utmost importance that the patient should be urged by both physician and dentist to keep the mouth in a healthy condition by regular care and so avoid the possibility of driving bacteria into the blood-stream during mastication as a result of periodontoclasia, or of ever having to have a tooth extracted, as Dr. Allison points out in his timely editorial.

In the future much more importance must be placed on the tissues which surround the teeth. It is a tragedy of modern dentistry that at so many of our conventions less importance is placed on periodontal problems than on many phases of restorative procedures. Dentistry will never reach the goal that we have set for it until first things are given first place, when the physiological, the biological and the bacteriological aspects of our professional work are given the prominence which such subjects demand.

BOOK REVIEWS

Applied Orthodontics, by James David McCoy, M.S., D.D.S., F.A.C.D., Associate Clinical Professor of Surgery (Oral), School of Medicine, University of Southern California, Los Angeles, California. Formerly Professor of Orthodontics in the College of Dentistry, University of Southern California, Los Angeles, California. Fifth edition, thoroughly revised. Illustrated with 227 engravings and a plate. Published in 1941 by the Mac-Millans, St. Martin's House, Toronto, Canada. Price \$5.15.

"Orthodontics may be defined as that science which has for its object the prevention and correction of dental anomalies." This being true and as all dentists should be interested in such problems, this book offers a fund of knowledge which should prove a welcome aid in the conduct of every practice.

Even though a man turns over all his orthodontic problems to the specialist he still has to make decisions re objectionable habits in his child patients, abnormal frenums, constitutional disorders, the premature loss or prolonged retention of deciduous teeth, tardy eruption of permanent teeth, supernumerary teeth, missing teeth, mouth breathing, etc., and so a perusal of this book should prove most helpful. To the man who renders orthodontic service even to a limited degree, who has to make a diagnosis and complete the treatment this book should prove of particular value.

Orthodontics deals with the development of personality, with the study of biology and physiology and cannot be segregated from other dental spheres of practice. Its scope is limitless and worthy of the efforts of the best minds in our profession.—*M. H. G.*

•

Orientation in American Dentistry, Its History and Social-professional Background, by Alfred J. Asgis, Sc.B. M.A., D.D.S., Ph.D.; Assistant Professor of Oral Surgery and Lecturer on Orientation, New York University, College of Dentistry; Author of "Public Health Dentistry and Health Security," "Outline of Dental Socio-economics," "Functional Dental Education," etc. Published by the Clinical Press, 33 West 42nd Street, New York City. Price \$2.50.

This is a text-workbook for dental students and professional health workers to meet the needs of undergraduate dental education. The American Association of Dental Schools recommended such a course in dental orientation in its educational report in 1935. This course offered by Dr. Asgis is patterned on the general principles of that report. The purpose is to aid the student in his understanding of the historical background and social growth of dentistry as a profession.

The general objectives are to help the

student appreciate the continuity of development of dentistry and dental education, to think of dentistry in terms of a health-service profession and to acquire knowledge of principles and methods of how to study dentistry most effectively and economically. The extensive reference to periodical literature is very valuable.

While the subject matter has been arranged to meet classroom needs this manual should prove most helpful also in preparing lectures or for use in study clubs interested in the orientation of contemporary dental problems.
—M. H. G.

Practice Building and Building for Practice, by Ash-Temple Company, Limited, of Canada.

This is a 22 page booklet published for the purpose of being a helpful reference book for those interested in solving the many problems that arise in the conduct of a dental practice; also as an instructive manual for the dental assistant enabling her to co-operate more effectively.

That many dental practices are carried on with little outstanding efficiency is very evident to the most casual observer. That most so-called successful practices are lacking in some essentials is also an obvious fact. This being the case anything that will tend to correct these failures and enable us to conduct our practices on a level closer to the ideal should be most welcome to all of us.

This booklet points out that the main factors

involved for permanent success in dentistry are:

- Ability to do good work
- Ability to sell services
- Ability to handle finances

It points out that, right or wrong, appearance is of greater importance in the minds of our patients than is health or the question of finance. This point should be kept in the foreground in dealing with patients.

Other subjects dealt with are: "Financial Returns," "Office Atmosphere," "Enthusiasm," "Dental Societies," "Discipline," "Happiness," "Dentistry and the Public," "Dentistry for Children," "Comments on the Business Side," "Voice, Tone and Expression," "Telephone Technique," "Excellence is not Extravagance," "Suggestions for a Successful Practice."

An outsider can often analyze our practice and see our position with a more accurate perspective than can we ourselves. Who is in a better position than our dental dealers to study these problems and render us valuable suggestions for the successful conduct of our practices?

Mr. E. E. Rogers, Western Director of the Ash-Temple Company, prepared this booklet and the product reflects great credit on Mr. Rogers' ability to sense the need of the average dentist in conducting his practice.

This booklet is being distributed to those who are interested in improving their practices and their personality.

The profession is indebted to this Company for making this treatise available in such an attractive form.—M. H. G.

CORRESPONDENCE

To the Editor, Journal of the C.D.A.:

(Excerpts from a letter received the end of January from a leader in a Dental School in England.)

It is very pleasant to know that you remember us and that we have your prayers. We need them but we are happy and know that our side will win whatever happens to individuals.

The war has its very good side. Our people—and I plead guilty myself—had become very careless and indifferent to the best things. Now there is a new and wonderful spirit here. It is awful to sit in the basement of your house

and hear your neighbours crushed to death a hundred yards away. But the instant it happens everyone goes dashing through the dust and the smoke to lend a hand and the most ordinary people seem to be brave and steady and the next day go on with their work as though nothing had happened. The girls on my staff here have had many nights of fire and terror but have never once missed a day's work or even been late in the morning. They turn up at 8 a.m. as smiling and cheery as can be. The Jerries have not hit us in any vital respect so far.

We have managed to carry on the Hospital

Correspondence

and Dental School well. Twice we have had to close for a week for repairs but we soon get going again and the students attend and work well.

All the help we receive from you people in Canada and the U.S. and the rest of the Empire is a great inspiration to us.

(Signed) _____

To the Editor, Journal of the C.D.A.:

(*Excerpt from letter received from a prominent dentist, New Zealand, in January.*)

This war is very distracting, but I am glad to observe that we are commencing to strike some shrewd blows at last. Italy seems to be getting in a bad way in spite of all the braggadocio of Mussolini and the gang of fiddlers, harp-players, and singers that constitute his mighty army. Such a crowd in their efforts to rebuild the Roman Empire appear to be staging a Gilbertian show that ought to provide some bright interludes for future historians. Hitler, on the other hand, seems a more difficult proposition. But I am convinced we will ultimately destroy this slayer of innocent women and children. The task might entail great sacrifices in blood and treasure, but never, never, must we allow a thought of defeat to weaken our will and purpose. "Never for us the lowered banner—never the lost endeavour." That must be our motto, and so until the end, even although we stand bleeding and bowed on the stricken field. But this will not matter so long as the flag of Liberty still flutters above the carnage.

(Signed) _____

January 30, 1941.

To Dr. Don W. Gullett, Secretary,
R.C.D.S., Toronto, Ontario.

Re: Income Returns of Dentists

It is deemed advisable to direct your attention to a ruling of this Division applicable to 1939 and subsequent years, under which salaries of professional men are taxable in full without any deductions other than those specified in The Income War Tax Act, such as charitable and patriotic donations and payments to superannuation or pension funds. In particular, the cost of operating an automobile, including depreciation thereon, and the

annual fees to governing bodies will not be allowed.

As you are aware, the arrangement originally made was that dentists on salary would be allowed, as a deduction from such salary, annual dues paid to governing bodies under which authority to practice is issued, and membership association fees not exceeding \$75.00. As just indicated, such allowance will not be made for 1939 and subsequent years.

It is believed that the number of members of your profession affected by this ruling is very small and no doubt they are aware of the change in procedure by reason of adjustment already made in their 1939 assessments. However, the matter is specifically brought to your attention in view of the change in procedure as previously determined in order that you may be in a position to answer any enquiries that may be directed to you in this respect.

The change indicated was necessary to comply with the Exchequer Court Decision on this feature.

(Signed) C. F. ELLIOT,
Commissioner of Income Tax,
Department of National Revenue.

Toronto, January 13, 1941.

To Dr. Don W. Gullett, Secretary,
R.C.D.S., Toronto, Ontario.

Re: Regulations as to Military Training

We acknowledge your letter of January 9th, in which you request information as to the calling of the members of your profession for military training.

The Regulations do not place dentists in an excepted class and they are therefore subject to call for training as their age class is reached. Undoubtedly it would create difficulty for any member of your profession to be obliged to leave his practice on short notice but to date we have not had any application for postponement by, or on behalf of any member of your profession. Up to the present, of course, very few men over the age of 22 have been called in this Division, but in the succeeding calls in the older ages it is to be expected more of your profession may be called.

It is the privilege of anyone called for train-

ing to make application through this office to the Board for postponement of their period of training in order that they may have sufficient time to make suitable arrangements for someone to carry on their work during their absence. *I would suggest that you inform your members of this privilege, and I can assure you that they will receive every possible consideration from the Board of this Division. Your members, of course, should be advised that the Regulations do not permit exemptions, and it will be necessary for them to make arrangements for their release for the training period.*

I am enclosing several copies of the Regulations for information of yourself and your

members. Additional copies are available if required.

(Signed) R. A. IRWIN,
Divisional Registrar,
Department of National War Services.

Dummer, Sask., December 16, 1940.

To Dr. W. W. Irwin, of Moose Jaw, Sask.:

You wil faund my botton Teeth plate you made meny Years egoo please repear an sent to me as suun as possible as nex meal liv Moose Jaw for Dummer nex Thus wee have only on meal bifer Cresmash. most me lad at Moose Jaw on the 19 of

I Tank You

Yours, _____

DENTAL CORPS NEWS

General Dental Corps News

The Netherlands Government has established a Training Centre in Western Ontario, where native born Hollanders residing in Canada and the U.S.A. are to be given military training to fit them for service against our common enemy. The Canadian Dental Corps has been requested to arrange dental service to the personnel of this Training Centre.

The Norwegian Air Force Training Centre in Ontario also has made inquiries with regard to dental kits and treatment.

Pte. Wm. A. Nash of No. 2 Coy. died at Christie St. Hospital Jan 22nd and was buried with military honours on Jan. 24.

Pte. D. B. Angus of No. 16 Coy. died in St. Joseph's Hospital, London, on Jan. 20. He was given a military funeral with the R.C.A.F. providing escort and firing party.

A standard 5-chair dental clinic has been recommended at Lansdowne Park, Ottawa, and the construction of an additional 5-chair dental clinic at Petawawa Camp has been started. This will make three 5-chair clinics at this Camp.

Lt.-Col. G. L. Cameron, D.S.O., V.D., of C.D.C.H.Q., Ottawa, paid a visit of inspec-

tion to Nos. 12 and 20 Companies C.D.C. Regina, and to Nos. 10 and 18 Companies C.D.C. Winnipeg. The Inspecting Officer, in addition to the work of inspecting Company H.Q. and clinics, had the opportunity of addressing the C.D.C. officers at Regina and at Winnipeg.

The question of having dental officers attached to the R.C.A.F. Stations work evenings is being considered, so that daylight flying may be interfered with as little as possible. This is being carried out already at some Stations.

Every opportunity is being taken of Officers' Training Courses in the various Centres, in order that unqualified C.D.C. officers may prepare themselves for examinations.

Donations to Regimental Fund

The members of the Ontario Dental Nurses' and Assistants' Association have donated \$40 to the Regimental Fund of the C.D.C. This represents voluntary subscriptions from these members and is greatly appreciated by members of the Corps.

The Dental Dealers' Association and the Ontario Dental Association have also made generous donations to the Regimental Fund.

M.D. No. 10, Headquarters, Winnipeg, Manitoba

The news that Lt.-Col. G. L. Cameron, D.S.O., V.D., D.D.S., Ottawa, had lost his aged father at Regina was received with sympathy and regret. Before returning to Ottawa, Lt.-Col. Cameron was instructed to inspect Nos. 12, 20, and 10 and 18 Companies. This brought him to Winnipeg for four days where he met many old friends.

He was the chief speaker at a regular meeting of the Winnipeg Dental Society at which

Lt.-Col. Wright and Major Steele also spoke about the work of the C.D.C.

Fifteen officers and thirty-nine other ranks were on parade at Minto Barracks. His inspection also included a visit to the clinics in Winnipeg and Brandon.

Lt.-Col. and Mrs. W. W. Wright were at home to all C.D.C. officers and wives or lady friends on January 12, and similarly to all other ranks on January 14.

NEWS FROM THE PROVINCES

SASKATCHEWAN:

Dr. Harry Thomson Visits Saskatchewan

During the recent visit to Saskatchewan of Dr. Harry Thomson, Field Secretary of the Canadian Dental Hygiene Council, the Moose Jaw Dental Society was host to the members of the local Medical Society. Dr. Thomson addressed the members of both Societies on Dentistry in Relation to Public Health, and indicated the growing importance of dentistry as a health measure. He presented some of the newer trends and told of the large amount of research into the cause of dental caries. The address was a masterly one and was much appreciated by the large number of medical men and dentists present.

Moose Jaw Dental Society

At the January meeting of the Moose Jaw Dental Society, Dr. F. C. Harwood was appointed to give the lectures on Oral Hygiene, etc., to the nurses in training of the Moose Jaw General and Sisters of Providence Hospitals.

Regina Dental Society

The Regina Dental Society has been holding interesting monthly meetings since the opening of the fall and winter season, with the following officers for the year in charge: President, Dr. H. J. Kennedy; Vice-president, Dr. C. C. Clermont; and Secretary, Dr. D. M. MacFarland. The Society meets around the banquet table on the second Tuesday of each month in the Drake Hotel. At the October meeting the speaker was Mr. E. C. Leslie,

K.C., who took as his subject, "Dental Jurisprudence."

At the November meeting, Dr. Harry Thomson, Field Secretary of the Canadian Dental Hygiene Council, was the guest speaker and gave an interesting talk on various phases of Public Health. At this meeting a representative of the Society was appointed to attend a meeting called by the Board of Trade to discuss the question of hospitalization.

For the December meeting Dr. Maurice Powers, Medico-legal expert of the R.C.M.P., Regina, gave a very informative talk on the "Medico-legal Aspects of Criminal Investigation." His hearers were convinced that while the famous Force still lives up to its reputation for "getting its man," with the help of the scientist it can also convict the guilty.

Dr. J. Lloyd Brown was the guest speaker for the January meeting and took as his subject, "Socialism and its Relation to the Professions."

During the fall the Society made a donation of Twenty-five Dollars to the Hostess Club for entertaining the men on active service. A war savings certificate to the value of Eighty Dollars was also purchased by the Society.

Regina Dental Assistants

Mr. John Christie, of the Ash Temple Company, was the guest speaker at the Regina Dental Nurses' and Assistants' Association's regular supper meeting. His subject, "Practice Building", proved most interesting and helpful to the members present.

To assist the British Hospitals, the club has decided to collect and send medical supplies overseas. The current war-savings campaign was discussed and brought to the attention of the members and action is expected.

A draw was made during the evening, the prize winner being Mrs. Scott.

MANITOBA:

Winnipeg Dental Society

On January 22 after a dinner in the Fort Garry Hotel, Winnipeg, the members of the Winnipeg Dental Society listened to interesting and informative addresses of a war effort character from Lt.-Col. George L. Cameron, Lt.-Col. W. W. Wright, Major C. W. Steele and Dr. R. J. R. Bright.

Lt.-Col. Cameron, who is Assistant Director of Dental Services at National Defence Headquarters, is very well known to Manitoba dentists. His description of the difficulties encountered in organization of dental services at the outbreak of war and the rapidity and facility with which they were surmounted in all military districts in Canada so that every unit which left for overseas had its full complement of officers and men from the dental corps as well as equipment and operating instruments, assured the Society that the Canadian Dental Corps will measure up for efficiency with any of the branches of the C.A.S.F.

Lt.-Col. Wright and Major Steele, who are in charge of dental service for Military District No. 10 and Air Command District No. 18 respectively, had a complete army dental corps equipment on exhibition and went into some detail describing the local routine and services rendered the troops.

Dr. Bright, chairman of the Winnipeg School Board dental clinic, spoke of the war that he and his staff are waging to control the fifth column activities of public enemy No. 1, General Indifference about Mouth Health.

Dr. B. L. Toombs, President of the Winnipeg Dental Society, presided.

Manitoba Dental Association

At the regular January meeting of the Directors of the Manitoba Dental Association the executive officers of 1940 were re-elected

for 1941: Dr. A. E. Proctor, President; Dr. C. D. McLeod, Vice-president and Dr. J. F. Morrison, Secretary-treasurer and Registrar.

ONTARIO:

Canadian Oral Prophylactic Association

Nearly 500 dentists and ladies were guests of the Canadian Oral Prophylactic Association on January 20, at the King Edward Hotel, Toronto, to hear Dr. L. M. Waugh, of Columbia University. The Canadian Oral Prophylactic Association Executive must be congratulated on sponsoring such a fine meeting and making it possible for members of the profession in Ontario to hear the gifted and talented speaker.

The Toronto Orthodontic Club arranged a dinner party of some thirty guests to meet Dr. Waugh before the meeting.

Dr. Waugh had excellent motion pictures of his travels among the Eskimo. These were made more interesting by his running commentary during their projection. Following the motion pictures he gave an address on his work and findings, which was illustrated by coloured slides.

Toronto Academy of Dentistry

The Academy of Dentistry, Toronto, held its annual ladies night on January 30 in the form of a dinner dance. About 300 members with their ladies and friends were present and were received by President and Mrs. Guest; Lt. and Mrs. Philip and Dr. and Mrs. Schumacher. In a brief address of welcome by Pres. Guest, he pointed out that all net proceeds of the party would be turned over to the Ladies' Auxiliary to the Academy and the Canadian Dental Corps for their war work. Approximately \$40 was realized for this purpose.

Brant County Dental Society

At the annual dinner meeting of the above Society held January 21, the following officers were elected: President, Dr. E. T. Smith; Vice-president, Dr. J. R. Edmonds; Secretary-treasurer, Dr. M. A. Marling; Councillors to the Executive, Dr. Hugh Smith, Dr. R. C. McLaughlin and Dr. W. W. Race.—*Brantford Expositor*.

Durham-Ontario Dental Association

At the annual meeting of the Durham-Ontario Dental Association held in Oshawa, December 11, the following officers were elected: President, Dr. Harry Cooke; Secretary-treasurer, Dr. W. H. Gifford; both of Oshawa. Dr. McGregor of the Faculty of Dentistry, University of Toronto, spoke in the afternoon on the subject, "Psychology of Handling the Child Patient," and in the evening on "Dental Operations for the Child Patient."—*Port Hope Guide*.

Public School Dental Clinic

Owen Sound's 1940 Board of Education, at its first session on January 14, appointed Dr. W. J. Tackaberry and Dr. E. W. Sadler as public school dental officers at a salary of \$1,500 each per annum.

Each dental officer will devote five full half-days per week to the work during the school year and will supply his own offices, equipment and material.—Owen Sound, *Sun-Times*.

War Guests in London

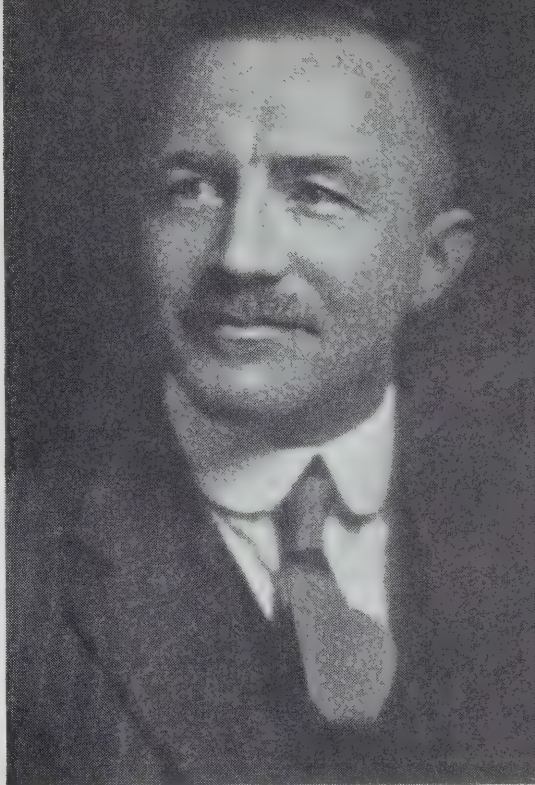
A considerable number of War Guests are located in London and vicinity and the London Dental Society has assumed responsibility for the dental services necessary for these children. The officers of the Society are in touch with the Children's Aid Society and when any dental treatment is required the Children's Aid Society notifies the executive of the Dental Society and the children are referred in rotation to a member of the Society.

Dental Nurses' Alumnae

On Tuesday, January 14th, the Dental Nurses' Alumnae held their regular monthly meeting at the Women's Union, St. George Street, Toronto.

During a short business meeting final arrangements were made for the annual bridge to be held on the evening of February 18th at Oak Room, Union Station. Proceeds of this bridge will be given towards a Mobile Dental Clinic for the Canadian Dental Corps.

Miss J. E. Rourke, librarian from Central Library, spoke to the members about "Latest Book Reviews".



DR. FRANK S. JARMAN

Dr. Frank S. Jarman Stricken

The untimely death of Dr. Frank S. Jarman was a great shock to his friends and colleagues. He was stricken in his office at the close of a day's work, with little or no warning. The dental profession in Ontario, particularly in Toronto, has lost a kindly, unassuming yet efficient member. He was conscientious in his work to the extreme.

He was not as widely known, perhaps, as some others because of his retiring nature, yet he was a loyal, congenial and a thoughtful friend to those who knew him best. He loved nature, his garden at home was his great love and his summer home on an island in Hollow Lake, Haliburton, was his paradise.

His passing comes at a time when he was in the midst of plans for a new office. The buoyance of making plans for greater service to his patients was thrilling him—Alas, who knows what tomorrow may bring!

Dr. Jarman is mourned by his wife, his mother in her 86th year and two sisters.

Dental Nurses and Assistants

TORONTO CHAPTER—The February meeting of the Toronto dental nurses and assistants which took the form of the annual banquet, was held in the Granite Club with nearly one hundred present. Tables were decorated in the Association colours and President Irean Checkley presided.

Music was furnished by three young boys of the Church of All Nations, playing piano, cello and violin. This was much enjoyed.

Guests included Mayor Dr. Fred Conboy, Mrs. Harvey Bean, Iverna Rae, of Hamilton; and Dr. and Mrs. Gordon Agnew, on furlough from China.

Following dinner, Dr. Agnew gave an excellent address on conditions in China and the part she may yet play in the World Peace later on. He also urged the assistants to contact the dental nurses in China, in the University in which Dr. Agnew is working, thus making an international contact. This, the girls present promised to do, and we shall look forward to receiving letters from them.

Katheleen Simpson, Sec.

LONDON CHAPTER—The London dental nurses and assistants met for their January meeting, in the office of Dr. F. F. Baker. The President, Madeline McKay, presided and plans for the program at the convention in May, were discussed.

Following the business meeting, Dr. G. F. Walden was introduced as the speaker of the evening. He gave a splendid talk on "Diet," and also outlined a course of study, which will be followed for the remainder of the season.

Eileen Green, Sec.

WINDSOR CHAPTER—The January meeting of the Essex-Kent County dental assistants was held in room 308 Canada Building, on the 6th of the month, with Dorothy Scott, presiding.

At this meeting we decided to use the proceeds of our recent drawing contest to provide the local Dental Corps with a typewriter and some paint. Plans for our annual Bridge were discussed and Irene McNair was named Convener. The War Fund Convener, Nora Kelly, reported Ten Dollars subscribed to date. This money has been forwarded to the Provincial War Fund Convener.

At the close of the business meeting, Mrs. H. W. Johnston was introduced and spoke on the "Care of the Skin." This talk proved very interesting. *Winnifred E. Grier, Cor. Sec.*

SUDBURY DISTRICT CHAPTER—The February meeting of the Sudbury District dental nurses and assistants was held on the 3rd in Sudbury, as a dinner meeting, with the President, Dorothy Fowler presiding.

Plans were made to meet every second Monday to do war work for the Red Cross.

The special guest of the evening was Mrs. Fern L. Cook, Ontario President, who took over the meeting and presented the President with a beautiful Gavel. Mrs. Cook spoke to the members on the work of the different chapters and the Convention, and answered any questions that the members asked. She was heartily thanked and the meeting adjourned.

Bernice Boyd, Sec.

THUNDER BAY CHAPTER—The regular meeting of the Thunder Bay dental assistants was held at the home of Ruth Garland, January 6 with several members in attendance. Our Chapter is indeed sorry to lose four members, namely Maxine Sutherland, Nora Bryson, Margaret Goodrick and Sis Holmes, but is glad to know that they will be enrolled as Associate members. We wish them luck in their new undertaking.

This Chapter was fortunate in having a visit from Helena Logan, a Toronto member, during the holiday season period. Several of the members had the opportunity of entertaining Helena at luncheon, at the Prince Arthur Hotel, on Dec. 28.

Maxine Sutherland opened her home for a social evening, Dec. 29. It was regretted that more members could not be present to hear the splendid paper prepared and given by Helena Logan on "Timely Hints." Miss Pat Wheatley was elected President to fill the vacancy left by Maxine, and Mary Armstrong was elected Treasurer in place of Margaret Goodrick. Refreshments were served.

Ruth Garland, Sec.

KITCHENER DISTRICT CHAPTER—The members of the Kitchener district held their February meeting on the 3rd at the Granite Club, Kitchener. They were entertained at dinner by the Kitchener-Waterloo Dental As-

sociation at 6.30 and later in the evening Dr. I. H. Ante addressed the meeting.

The business meeting consisted chiefly of making arrangements for the dance to be held on April 25, in the Y.M.C.A. hall, Kitchener.

Ruth Clark, Sec.

• **War Guests in Ottawa**

Members of the Ottawa Dental Society have arranged to look after free of charge the dental requirements of all War Guests in Ottawa for the duration of the war.—*Ottawa Citizen.*

• **Ladies' Auxiliary, Toronto**

The Ladies' Auxiliary of the Toronto Academy of Dentistry and to Canadian Dental Corps, No. 2 Company, continues its good services. Letters have just been received from Lt.-Col. W. G. Trelford, overseas, acknowledging gifts. It is the policy of the auxiliary to send overseas \$15.00 in cash and \$20.00 in cigarettes each month, and also \$15.00 to Lt.-Col. Bean at M.D. No. 2, headquarters in Toronto. The Dental Corps attached to the Air Arm in Toronto district, under Major Wansbrough, benefits also from the thoughtfulness of the Toronto ladies.

The annual bridge was held at Sherbourne House on February 20th. There were 35 tables and a total of \$75 raised for the work of the Auxiliary. Dr. George Covey was the lucky winner of the grand prize—a choice ham. There were many other lucky number prizes donated for the occasion.

To further raise funds, the City of Toronto is divided into three sections where respective groups have set an objective in total of \$400. Mrs. Ross Thomas, Mrs. E. C. Veitch, Mrs. H. R. Skilling and Mrs. W. R. Hendry are leaders in this drive, that money may continue to be available regularly for purpose of the Canadian Dental Corps.

• **Dental Nurses' Alumnae**

Three hundred guests attended the Canadian Dental Nurses' Alumnae annual bridge in the Oak Room of the Union Station, Toronto, on Tuesday evening, February 18.

Draws for the seventy-four lucky number prizes were made by Lt.-Col. Bean, Major Wansbrough, Capt. Barnet, Capt. Grant, Capt. Sutherland and Lt. Buchanan.

Miss Ruth Grimmon, President of the Alumnae presented Lt. Col. Bean with a cheque for \$104, representing the proceeds of the bridge which will be used toward purchasing a mobile unit for the Canadian Dental Corps.

Helen L. McKinley,
Corresponding Secretary.

• **Faculty Representative**

Dr. E. W. Paul, Professor of Exodontia and Anaesthesia in the Faculty of Dentistry, University of Toronto, has been appointed faculty representative of the Board of Royal College of Dental Surgeons for the next two years. He succeeds Dean Mason, who has been the member for a number of years but desired to retire.

QUEBEC:

Montreal Dental Club

A general meeting of the Montreal Dental Club was held in the Club rooms on January 27. Dr. K. Carver, the new president, was in the chair. The speaker was Colonel R. St. J. Macdonald, J.P., V.D., B.A., M.D.C.M., Associate Professor in Public Health and Preventive Medicine at McGill University, Officer Commanding M.D. No. 4, Field Hygiene Section, Royal Army Medical Corps. His subject was "Organization of the Army Medical Service in War with Reference to Field Sanitation."

Dr. Victor Pinard, of Ottawa, Ontario, formerly of Paris, France, was elected as an out-of-town member of the Montreal Dental Club.

• **Mount Royal Dental Society**

Dr. H. Barishman, of Brooklyn, N.Y., was the guest clinician of the Mount Royal Dental Society and discussed Crown and Bridgework techniques.

Commencing the afternoon session, the clinician showed a number of slides, depicting armamentarium and procedure in techniques. In the practical demonstration which followed, Dr. Barishman illustrated many time-saving methods in correcting compound impressions and waxing them.

Following the completion of the afternoon

period, dinner was served during which the members enjoyed two hours of real fellowship.

The principal feature of the evening session was Dr. Barishman's own modification of the Black outline form for inlay preparation. This modification allows minimum cutting of teeth and by means of bevelling, assures perfect adaptation of the gingival margin.

Taking impressions of bell-shaped teeth was shown to be a simple procedure with proper trimming of the band.

The clinician's presentation was well received as one was able to readily adapt many of his suggestions and methods for use in the general practitioner's office.

Société Dentaire De Montréal

The January meeting of La Société Dentaire de Montréal was held on Wednesday, the 15th. The guest speaker of the evening was Dr. Felix A. French, of Ottawa, who presented a lecture and a demonstration on "Acrylic Denture Bases."

On the same evening, the following members presented answers to the following questions:

Dr. Armand Fortier: "What method do you use to collect your old bills?"

Dr. Gérard Plamondon: "Should the dentist prescribe diets, and if so, in what instances is he justified?"

Dr. D. Graton: "Describe the proper procedures in handling a child during the first visit to the dentist."

Dr. Claude de Grandmont: "The treatment of secondary haemorrhages."

Dr. A. Masson: "How do you handle decalcified dentine in deep cavities?"

The meeting was a very successful one and there was a large attendance.

BRITISH COLUMBIA:

Vancouver Dental Society

The program committee of the Vancouver Dental Society again presented an allied medical subject. We were very fortunate in having two very able speakers, Dr. D. H. Williams and Dr. D. E. H. Cleveland, dermatologists.

Dr. Williams, by means of several slides

presented "Buccal Manifestations of Cutaneous Disorders." One very interesting point brought forward and which is receiving considerable attention from the profession is the disorders caused by the approximation of two dissimilar metals. We are all aware of the discomfort which patients sometimes have under such conditions but fail to realize that lesions are caused by this condition.

Dr. Cleveland spoke on "Oral Reactions to Bismuth Therapy in the Treatment of Syphilis." The chief point from a practical standpoint, for the operator, was the means of preventing infection by the liberal use of soap, in washing of the hands. If there are any abrasions or fissures on the hands they should be protected by collodion to seal them and thus prevent any bacteria from getting into the system. Washing should be complete both before and after operating.

Dr. W. J. Lea gave a report to the Council, regarding the legislation passed at the last session and the "Cowan Case." A full report will be published after the Supreme Court Sitting.

Dr. Harold Cline, Councillor for the Pacific Coast Dental Conference, reported on the Convention which is being held in Portland, Oregon, July 7-11. Twelve hours have been set aside for essays and chair and table clinics. This means that there will be at least 60 papers and many clinics. Several outstanding clinicians have already agreed to be guest clinicians. Some of these are: Dr. R. O. Schlosser, Professor of Prosthetic Dentistry at Northwestern University; Dr. Clarence O. Simpson, St. Louis, Mo.; Dr. A. F. Schopper, Kansas City, Mo.; Dr. Ernest Granger, Mt. Vernon, N.Y.; Dr. E. V. McCollum, of Johns Hopkins University, Baltimore, Md.

ALBERTA:

Vincent's Infection

During the Christmas holidays the writer treated Vincent's infection in the mouths of three Air Force students, two studying in different cities in Ontario, and one in Saskatchewan. All three reported a considerable epidemic in the schools which they were attending.

Both at Calgary and Edmonton, dental

officers reported considerable epidemics of the same disease in the late fall.

The frequent occurrence of this disease in the mouths of young healthy men whose periodontal tissues should be very resistant to the infection, is hard to understand.

Edmonton Dental Nurses and Assistants

The Edmonton dental nurses and assistants held their regular monthly meeting in Dr. Fraser's office on February 3.

Dr. Orobko addressed the meeting choos-

ing for his subject, "Diet in Relation to the Teeth."

Arrangements were discussed and are now underway, in preparation for the Western Canada Convention to be held in June.

Gertrude O'Neill, Sec.

Edmonton Dental Society

Dr. E. H. Watts, of the Medical Department, University of Alberta, gave a very interesting talk on Anaesthetics and Anaesthesia, at the February meeting of the Edmonton Dental Society.

EMPIRE NEWS

GREAT BRITAIN:

A cable on February 22 from Lt.-Col. W. G. Trelford, A.D.D.S., London, England, brought the news that Mr. Thomas Hellmer, Assistant Secretary of the British Dental Association, had been killed in a motor accident. Further particulars and details are lacking at time of writing.

The deceased's wife is in England and is well; his mother and two young sons, age 2 and 4 years, are in Toronto. They came to Canada for the children's safety early last summer, and are living with his sister and her husband, Mr. and Mrs. Douglas Moseley.

Guy's Hospital

Once again the enemy have descended upon us from the air in a concentrated attack more furious than anything yet attempted. This time different kinds of bombs were used, since in addition to their incendiary nature, there was incorporated an explosive feature which made them much more dangerous and difficult to deal with.

In spite of the severity of the attack and its concentration in our area, Guy's Hospital presented an unaltered appearance to the morning sun next day. This is indeed a very lucky escape, made all the more thrilling by the news that a land mine had fallen within a few hundred yards of us but that its parachute had been caught up on a certain structure, preventing the mine from touching the ground. It is said that the mine weighed two

thousand pounds, contained twelve hundred pounds of high explosive, and boasted of no less than seventeen detonators. However, the bomb disposal squad dealt with this menace in their own inimitable way.

Inside the surgery a large reception staff consisting of medical officers of all ranks, numerous dressers each with his allotted job to do, and a good supply of nurses, waited in cool readiness for any emergency. The steady stream of casualties were sorted, according to the type and degree of his or her injury. In the reception ward the beds and blankets are kept warm, and the radiant heat cradles kept aglow twenty-four hours a day; in addition, there are always immediately available facilities for transfusion and infusion, so that these badly-shaken air raid victims were able to have their necessary rest, warmth and fluids without delay.

Our surgeons rendered expert by actual experience in this war, carefully chose the suitable cases for operation and operated ceaselessly without regard for personal fatigue. In fact, the entire procedure from the admission of a casualty to the evacuation, when fit for the journey, was carried out with commendable time-tempered smoothness.—*Guy's Hospital Gazette*, Dec. 14, 1940.

War Time Registration of Doctors

An interesting departure has been made by the General Medical Council under a recent Defence Regulation which enables medical

practitioners legally entitled to practise in certain areas outside the United Kingdom to be registered in the Colonial or Foreign List of the Medical Register for the period of the war. This regulation will enable doctors from Canada and the United States to come to this country and play their part in the war. The doctors who will be admitted to temporary registration under this scheme must be either British subjects or citizens of the United States, of good character and hold a recognized diploma. If at some future stage of the war it seemed desirable to enlist the services of dental practitioners from overseas who are not at present eligible for registration in the Dentists Register, this precedent of temporary registration might be usefully extended to meet the position.—*Br. D. Jrl.*

AUSTRALIA:

Training of Dental Technicians

At the October meeting of the New South Wales Branch of the Australian Dental Association the President referred to the lack of facilities for the training of dental technicians and expressed the view that the profession would shortly be faced with difficulty in securing dental mechanics. He expressed the very definite opinion that the most appropriate place for training technicians would be at the Dental Hospital. It was resolved that the President confer with the Dental Technicians Committee of the Dental Association in order to prepare a letter to the Board of the Hospital concerning the establishment of classes of instruction for dental technicians.—*D. Jrl. of Aust.*

GENERAL NEWS

New Dental Health Foundation is Announced

A new foundation to advance dental health in the United States has been announced by the Martha M. Hall Foundation of New York. It is reported that several million dollars are available for the work of the foundation in advancing dental health through education, research and community aid. The new foundation will be known as The National Dental Hygiene Association. It will be a memorial to William Henry Hall and has opened headquarters in Washington, D.C., from which its activities will henceforth be guided.

In the development of its program, the National Dental Hygiene Association expects to co-ordinate its efforts with those of the American Dental Association and its component societies and with the dental programs being conducted by State Health Departments.

A basic feature of the program will be the encouragement of lay support and participation in the field of dental health through cooperation with community health and welfare groups in the planning of co-ordinated educational and service programs.

The Association will publish approved educational material for lay consumption, encourage dental research work and stimulate generally a broader understanding of the basic

relationship of dental care to the health needs of the community and country.—*Fortnightly Review of the Chi. D. Soc., Feb. 1, 1941.*

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Dominion Dental Council Examinations

Due to military arrangements the graduating students of the various dental colleges will be obliged to take two weeks' military training following the University examinations, in the district in which the University is located. The Dominion Dental Council has been able to make arrangements to hold its examinations the last week of May, commencing on the 26th.

All Class A students must have their fees in the Secretary's office not later than April 30 or suffer penalty of having them returned and the student not allowed to write until the following year. All Class D applicants should have their fees in not later than the first of April.

The time-table is as follows:—

Monday, May 26—Preventive Dentistry.

Tuesday, May 27—Operative Dentistry.

Wednesday, May 28—Prosthodontia.

Thursday, May 29—Oral Medicine.

Friday, May 30—Dental Surgery & Anaesthesia.

Saturday, May 31—Practice Management.

Class D men will make arrangements with

the Clinical Examiner in the district where they write their examinations as to when the Clinical examination will be.

Canadian Dental Hygiene Council

A meeting of the Executive Committee was held on December 18 at the Embassy Hotel. Dr. A. W. Ellis presided, and there were present Drs. Broughton, Bothwell, Marsh, Lapp, Thomson and Grant.

The audited statement for the year ending September 30, 1940, is as follows:—

STATEMENT OF RECEIPTS	
Cash on hand and in bank, Sept. 30, 1939	\$ 3,984.76
Canadian Life Insurance Officers' Association grant	8,000.00
Canadian Dental Research Foundation, rent	100.00
Ontario Public Dental Health Committee, refund on travelling expenses	458.24
Nova Scotia Central Committee, refund from Nova Scotia campaign fund	338.29
Grant to Saskatchewan Central Committee for special research project, shown in 1939 statement, not used, since re-deposited	1,000.00
	\$13,881.29

STATEMENT OF DISBURSEMENTS	
Nova Scotia Central Committee	\$ 250.00
Manitoba Central Committee	250.00
Canadian Dental Association, Public Relations Committee	25.00
Ontario Mouth Health Campaign	358.72
General field travelling expenses	1,452.88
Literature and films	556.42
Field Secretary's salary — part-time (Dr. Harry S. Thomson)	5,000.00
Secretary's honorarium (Dr. E. A. Grant)	999.96
Rent	300.00
Postage, stationery and office expenses	245.70
Committee meeting expenses	126.75
Stenographic assistance	248.45
Audit fee	35.00
	\$ 9,848.88
Cash on hand and in bank, Sept. 30, 1940	4,032.41
	\$13,881.29

—Edmund A. Grant, Secretary.

Michigan Dental Law Retained by a 3-2 Vote

In the November 5 general election, the residents of the state of Michigan voted

566,146 to 363,552 in favour of the retention of the 1939 Dental Act. This act, which completely revised and greatly strengthened the existing dental law, was opposed by certain interests who did not want dental advertising restricted. In an attempt to defeat the act, they forced it to a public referendum.

The dental societies of Michigan conducted a vigorous and well planned campaign to educate the voters to an appreciation of the value of the amendments and the results indicate that their efforts were worthwhile. The act went into effect on December 13.—*A.D.A. Release.*

Eighth Annual Postgraduate Course in Periodontia

*New York University College of Dentistry
New York, New York.*

New York University College of Dentistry will hold its eighth annual postgraduate course in Periodontia for twenty sessions, as follows: Schedule A—morning and afternoon sessions, June 16 to June 27, 1941. Schedule B—morning and afternoon sessions, June 16 to 18; mornings only, June 19 to July 9. All dates inclusive. The fee is \$100. COURSE LIMITED TO FIFTEEN MEN. Preference given in order of receipt of application.

The course will include aetiology, diagnosis, and treatment of periodontal disease; various techniques of pocket eradication, with conservative treatment stressed; Vincent's infection; diagnosis of types of bone resorption; mouth manifestations of systemic disease; periodontal foci of infection; toothbrushing; instrumentation; balancing of occlusion. The course is taught by lectures and clinical work, each student treating several cases.

Instruction is given by Doctors Samuel Charles Miller, Sidney Sorrin, J. Lewis Blass, and the entire Periodontia faculty. For further information and application, address the Office of the Dean, New York University College of Dentistry, 209 East 23rd Street, New York, New York.

Minneapolis Plant, With Heavy Defense Orders, Tries Plan to Cut Loss From Colds

For four weeks Continental Machines, Inc., of Minneapolis, has been providing its workers with daily vitamin doses and, at the height

of an influenza epidemic, it has so far succeeded in keeping almost all its skilled mechanics on the job. Only eight of 300 employees are not at work, company officials said.

Every morning at 10 o'clock the lathes and welding torches are shut off for ten minutes, one of two rest recesses during the day, and paper cups are passed around. In each cup is a dark round halibut liver oil capsule charged with Vitamin A, D, B-1 and G.

The mechanics, the executives in the offices above the big shop, the stenographers and the girl at the telephone switchboard all take the pills.

No one is required to take them, but nearly

everyone does. The men say that they feel better. They complain only, and that smilingly, that the doses make them eat more.

They said that their employees, working fifty-five hours a week (which is fifteen hours overtime at time and a half) were entitled to all the help possible to keep in condition.

Dr. Harold S. Diehl, dean of medical sciences and Professor of Preventive Medicine and Public Health at the University of Minnesota, who for years has been seeking a cold prophylactic, commented that his research did not show vitamin pills to be effective. The machine company executives said that they were entitled to experiment. — N. Y. Times, Feb. 2, 1941.

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Frank Leslie Comstock, of Berwick, N.S., aged 59, died January 17. He was graduated from Tufts Dental College in 1908, came to Berwick and practised his profession for thirty-two years.

He was a member of Berwick Lodge, I.O.O.F. and of the Berwick Baptist Church. For many years he was a member of the choir and of the male quartet.

Dr. Comstock is survived by his wife and one son. There are three children, also, by his first marriage. Three sisters and one brother also survive.

•

Frank S. Jarman, of Toronto, died suddenly, aged 55 years, from heart attack on February 14.

Dr. Jarman was born at Bancroft, Ontario, where he received his early education. He obtained his matriculation by correspondence. He was graduated from the Royal College of Dental Surgeons in 1917. He practised for two years in his home town,

then associated himself with Dr. E. W. Paul, Toronto, exodontist, for a number of years, finally launching out in his own specialty practice. He was Assistant Professor of Exodontia at his Alma Mater for a number of years; a councillor of Toronto Academy of Dentistry in 1936. He was a Free Mason and member of the Anglican Church.

His widow, mother and two sisters survive.

■

Joseph Ulric de Lisle, of Hull, Quebec, aged 68, died suddenly January 7 at his home. He had been in poor health for some time. He was a graduate of Laval University in 1905 and since then has been practising his profession in Hull.

For several years he occupied the position of chief game warden in Hull and surrounding counties and was widely known throughout the district.

Dr. de Lisle is survived by four sons, three daughters and a sister.

. . . SECTION FRANÇAISE . . .

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Dentiers en Substances Acryliques*

par FELIX A. FRENCH, D.D.S., F.A.C.D.

traduit de l'anglais par Gérard de Montigny

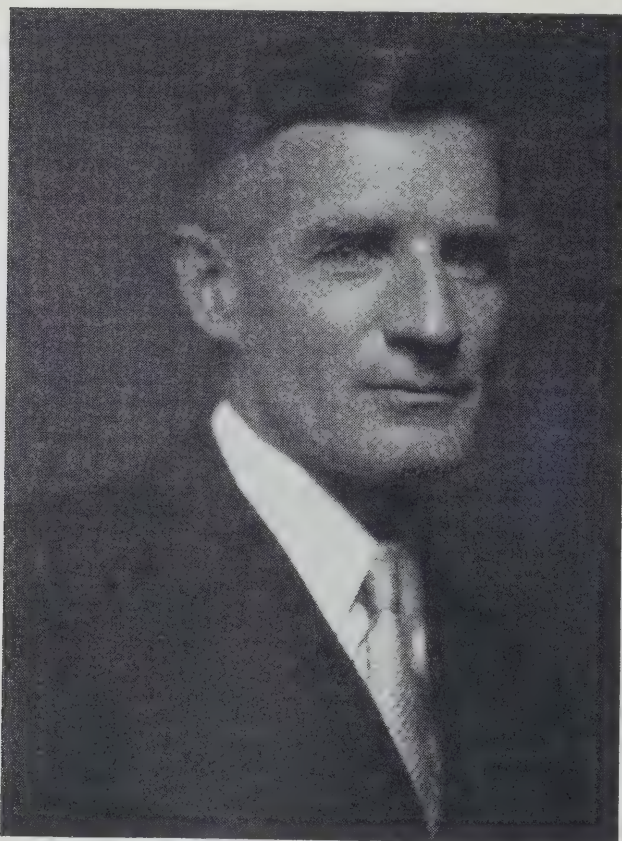
Les résines, connues sous le nom de résines acryliques, ne sont pas des substances bien neuves pour les chimistes de notre ère; on les utilise depuis vingt ans pour fabriquer une foule d'objets d'usage courant. Ce n'est que depuis quelques années, qu'on les emploie pour la fabrication de substances propres à la confection des dentiers.

S'il nous fallait croire toutes les qualités, qui leur sont conférées ou dont les gratifient les réclames enthousiastes des fabricants, on serait convaincu que la profession dentaire a finalement en main une substance idéale pour la fabrication des pièces de prothèse — Malheureusement, tel n'est pas le cas. Un matériel idéal pour les dentiers devrait répondre à toutes les exigences qu'on attend de lui; les résines acryliques possèdent quelques unes de ces conditions, elles ont certains avantages mais aussi de grands défauts.

Les résines se manipulent facilement, se réparent très bien, ont une force suffisante, une couleur naturelle qui ne change pas. Elles prennent et retiennent un beau poli, sont sans goût et sans odeur, n'irritent pas les tissus, sont assez légères, peuvent être employées pour les prothèses complètes et les prothèses partielles, elles sont assez résistantes et ne coûtent pas trop cher, quand elles sont achetées en grande quantité.

De plus, leur état n'est pas affecté par les fluides buccaux et elles n'absorbent pas les

* Conférence donnée, le 15 janvier dernier, dans les locaux de la Faculté de Chirurgie Dentaire de l'Université de Montréal, devant les membres de la Société Dentaire de Montréal.

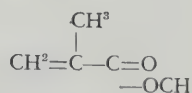
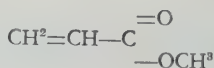
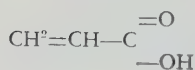


FELIX A. FRENCH, D.D.S., F.A.C.D.

aliments. Elles ne demandent pas non plus des appareils ou une instrumentation compliqués. Mais comme tous les contes de fées, tout ceci est trop beau pour être vrai.

La qualité primordiale d'une bonne substance, pouvant servir à la fabrication de dentiers, est la conservation intégrale de sa forme; et c'est le côté faible de nos résines acryliques. Nous ne pouvons pas obtenir une reproduction parfaite du modèle, et le maintien de cette reproduction avec cette substance. Pour comprendre ce phénomène, il faut connaître les propriétés de ces résines. Ces propriétés sont bien connues depuis qu'on les emploie généralement dans l'industrie, où ce matériel est employé sous une forme totalement condensée (polymérisée) ou en granules rondes, sous forme de poudre. Quand on les chauffe pour les mouler, elles se dilatent considérablement sous l'effet de cette chaleur et elles se contractent de nouveau quand elles reviennent à l'état froid.

Voici les trois formules sous lesquelles sont employées les résines acryliques:



En dentisterie, nous les employons selon les deux dernières formules et d'une manière quelque peu différente, ce qui complique le problème de la rétention de leur forme originale. Le manufacturier, ou celui qui les emploie, mêle un liquide à la poudre pour produire une masse plastique, qui est pressée ou moulée facilement dans le moufle. Le liquide, qu'on nomme "Monomère" est constitué des mêmes éléments que la poudre; c'est en réalité la même substance que la poudre, mais sous une forme différente. Quand une chaleur et une pression suffisantes sont appliquées sur cette résine, elle devient dure ou polymérisée, mais en perdant environ 20% de son volume. C'est pourquoi, quand on mêle, selon la prescription, une partie de liquide à trois parties de poudre, il faut s'attendre, après le chauffage, à une contraction de 5 à 6%, en plus des dilatations et contractions thermiques, qu'on a vues tout à l'heure. Le liquide ne dissout pas la poudre; il ne fait que la rendre plastique; les granules deviennent molles et gélatineuses. Quand ces granules amollies sont pressées dans le moufle, elles sont aplaties en forme de disque — chacun de ces disques renferme une force qui tend à leur donner leur forme originale.

Cette tendance est sans effet tant que la pièce de prothèse est relativement froide et dure; mais quand la résine est réchauffée assez pour être amollie, cette force peut entrer en jeu et faire des siennes.

Voilà l'explication de cette déformation des dentiers en résine acrylique, quand on les place dans l'eau très chaude pour les réparer ou les réajuster.

Les résines acryliques sont supposées être très dures pour les dents; il arrive souvent de constater qu'un dentier a une ou plusieurs dents craquées, quand on le sort du moufle.

On a mis de l'avant plusieurs méthodes d'obvier à cet inconvénient ennuyeux.

Il peut sembler qu'une condensation complète de la masse plastique (polymérisation totale) donne à la résine les meilleures propriétés mécaniques. Mais dans ce cas, la contraction serait considérable et l'adaptation serait défectueuse. — Cependant, les espaces créés autour des dents contribueraient à soulager les dents et à prévenir leur craquement.

D'un autre côté, une cuisson trop courte, à une température moyenne diminuera la contraction et donnera une meilleure adaptation; mais la résine entourera les dents plus fortement, cause de fracture plus fréquente des dents.

Le conférencier démontre ici à l'assistance sa méthode de mêler la poudre au liquide. En ce faisant, il parle des différentes marques de ces substances, qui sont sur le marché.

Il y a un autre inconvénient à employer les résines acryliques pour la fabrication de nos dentiers; c'est la difficulté de sortir le dentier du moufle après sa cuisson. C'est un travail assez ardu que de séparer la pièce du modèle après sa cuisson.

Pour faciliter cette sortie du moufle, je place au dessus des dents, quand le dentier est inséré dans la partie inférieure du moufle, un protecteur en métal, qui simplifie beaucoup le travail.

En dépit de ses défauts, les résines acryliques représentent le meilleur matériel, que nous ayons présentement.

Le matériel idéal n'est pas encore arrivé.

DISCUSSION

M. le docteur D. Graton: "Cette résine acrylique est-elle irritante pour les tissus de la bouche?"

M. le docteur French: "Je ne crois pas avoir rencontré de cas, qui toléraient mal ce matériel; au contraire, je crois que les tissus s'accommodent très bien de cette substance. On m'a rapporté que des diabétiques avaient souffert d'irritation des muqueuses, après avoir porté ces pièces, à cause de l'acétone contenu dans ces résines acryliques. Je n'ai pu vérifier l'exactitude de ces rapports."

M. le docteur Charron: "Le réajustage de ces pièces est-il plus difficile que celui des pièces en vulcanite?"

M. le docteur French: "Comme je le disais plus haut, il peut se produire une déformation de ces pièces déjà cuites, si on les chauffe à un degré trop élevé, à cause des granules aplaties, qui tendent à reprendre leur volume primitif à cette température élevée. Le réajustage ("relining") de ces prothèses est réellement plus difficile à faire correctement qu'avec les pièces en vulcanite.

Permettez-moi de vous rappeler une aventure qui m'est arrivée, il n'y a pas longtemps au cours de la prise d'une empreinte pour une personne, qui est parente de votre président. Il s'agissait d'une prothèse complète du haut; toutes les conditions étaient normales pour la réussite d'une empreinte idéale. Je pris donc une empreinte, qui offrait le maximum de rétention. A la fin de mon travail, quand je mis le dentier en bouche, celui-ci paraissait beaucoup trop grand et ne montrait aucune rétention. Interloqué, je ne pouvais imputer la faute à qui que ce soit, puisque le dentier avait été tout complété à mon cabinet. Je conseillai à la patiente néanmoins de garder sa prothèse quelques jours et d'attendre quelque temps avant de recommencer le travail. Trois jours plus tard, la patiente me téléphone pour m'annoncer que son dentier avait une telle adaptation qu'il lui était impossible de l'enlever, seule. Je fis une enquête pour solutionner, si possible, ce problème et voici le résultat de mes constatations: la patiente souffrait de tuberculose à manifestations intermittentes; elle faisait de temps à autre des poussées de température de 101° F. Les capillaires de ses muqueuses étaient gonflés de sang et la circulation sanguine était au ralenti. Au contraire, quand je lui mis sa prothèse, sa température était baissée, la circulation avait repris son cours normal et ses muqueuses avaient diminué de volume. Le tout explique l'apparente inexactitude de la pièce; quand la muqueuse revint au volume qu'elle avait quand on prit l'empreinte, la pièce reprit son adaptation première."

M. le docteur A. Masson: "Les résines acryliques peuvent-elles être avantageusement recommandées aux personnes dont les tissus tolèrent mal la vulcanite?"

M. le docteur French: "Il se peut qu'on rencontre des patients, qui ont une idiosyncrasie pour les substances acryliques, comme il s'en trouve dont les muqueuses s'irritent au contact de la vulcanite.

A ce sujet, je vous rappellerai un cas, qui illustre le fait qu'il ne faut pas attribuer toutes les irritations de la bouche aux dents artificielles. C'est le cas d'une patiente, qui vint à mon cabinet pour changer ses dentiers, qui avaient été faits déjà deux ou trois fois avec les substances différentes, chaque fois; cette patiente se plaignait de démangeaisons des muqueuses de la bouche, de sensations fréquentes de chaleur, etc. J'examinai ses dentiers, qui étaient fort bien faits et je lui conseillai de ne pas les changer inutilement, car les sensations, qu'elle éprouvait ne pouvaient être causées par ses prothèses.

Elle laissa mon bureau, quelque peu dépitée.

Peu de temps plus tard, elle partit pour un voyage dans les îles britanniques et tout à coup des douleurs arthritiques, dont elle souffrait depuis toujours disparurent soudainement, en même temps que ses irritations buccales, pour ne réapparaître que quelques mois plus tard, à son retour au pays.

Ces ennuis de la bouche n'étaient certes pas causés par ses pièces de prothèse. C'est vous dire, qu'avant de jeter le blâme sur une pièce de prothèse, il faut s'assurer qu'il n'existe pas de troubles fonctionnels ou locaux.

Mais, les substances acryliques sont de nature à causer moins d'irritation que la vulcanite puisque celles-là sont conductrices des réactions thermiques tandis que celle-ci arrête les sensations de froid et de chaleur."

M. le docteur Paul Frigon: "Que se produit-il quand on ajoute plus de liquide qu'il en faut dans le mélange?"

M. le docteur French: "Vous aurez dans ce cas une contraction plus grande de votre pièce avec tous les inconvénients qui l'accompagnent."

M. le docteur G. Lajoie: "Les dentiers faits de cette substance ont-ils une longue durée?"

M. le docteur French: "Oui, je crois qu'un patient peut avoir un long service avec ces pièces."

L'Amputation Coronaire de la Pulpe

Justification—Réalisation

par M. G. MAHÉ

Définition.—L'amputation coronaire de la pulpe est le mode de traitement qui paraît le procédé de choix aux dents pluriradiculées, pour le stade de la carie dentaire caractérisé par le moment où la pulpe est atteinte et découverte par l'extension du processus destructif.

Indications.—Ce stade se présente sous trois formes schématiques dans lesquelles on peut assez facilement faire rentrer les modalités cliniques.

a) *Torpide*, c'est-à-dire sans les phénomènes inflammatoires et douloureux qui caractérisent la *pulpite*;

b) *Avec pulpite franche*, c'est-à-dire avec les phénomènes précités, mais avec cette caractéristique essentielle qu'ils en soient à leur *première manifestation* nette.

c) *Avec pulpe déjà altérée* dans sa texture normale et plus ou moins avancée sur la voie de la gangrène. L'opération peut convenir à ces trois formes, mais d'une façon inégale.

Possible dès la forme torpide, et trouvant même en celle-ci sa condition optima de perfection, elle ne s'impose cependant pas. Le traitement conservateur par coiffage de la pulpe intégrale présente assez de chances de succès pour lui être préféré.

Possible encore sur une pulpe déjà altérée, et susceptible d'y rendre des services dans les cas où aucune autre méthode ne donnerait de meilleurs résultats, elle doit cependant n'y être appliquée qu'avec une certaine prudence et quelques réserves.

Elle est donc l'opération de choix pour les cas de *pulpite franche* qui représentent, à dire vrai, la grosse majorité des cas de la pratique.

Justification.—La légitimité de cette opération étant encore parfois contestée, surtout en France, il n'est pas inutile de la justifier.

Elle se base d'abord sur ces considérations:

a) Si l'*ablation totale* de la pulpe s'impose encore aux dents uniradiculées, elle n'est cependant que le témoignage de l'impuissance actuelle où nous sommes de guérir et de conserver une pulpe qui a reçu une atteinte un peu marquée (1). C'est une opération de nécessité. Cette infériorité tient à ce qu'il n'existe pas, aux dents uniradiculées, de frontière anatomique entre la partie coronaire et la partie radiculaire de la pulpe, ni de différenciation physiologique entre les mêmes parties.

b) Au contraire, ces distinctions existent, et nettement marquées, aux dents pluriradiculées.

c) "L'*ablation totale*" est une réalité rarement *totale*, même aux dents dont la disposition radiculaire est schématiquement la plus simple. Des facteurs très nombreux, très divers, et dont quelques-uns sont absolument insoupçonnables, s'y opposent. Le praticien ne peut *jamais* être absolument sûr de ce qu'il fait.

d) Mieux vaut une racine nettement, franchement et proprement sectionnée, proprement coiffée et conservée, qu'une racine abandonnée par nécessité après un "tripotage" qui l'aura mise dans un état douteux.

e) Les résultats cliniques, acquis maintenant depuis quarante à cinquante ans, confirment absolument ces prémisses.

Méthodes.—Les modes d'exécution de l'amputation pulpaire, identiques dans les grandes lignes, reconnaissent cependant un certain nombre de variantes, qui ne sont pas indifférentes, selon que l'on considère:

a) La conception que l'on se fait de la *situation postopératoire des radicules*;

b) Le procédé de *préparation* (ou si l'on préfère d'*anesthésie*) de la pulpe.

A.—Les uns (Herbst) considèrent l'opération comme une *amputation chirurgicale* et confient aux forces naturelles le soin de cicatriser et de guérir la surface sectionnée.

Les autres (Walkoff, Pitsch, Gysi, Oscar Muller, Hess, etc.) estiment que l'opérateur doit poursuivre, par l'emploi d'agents médicamenteux, une transformation tissulaire des radicules. C'est le procédé généralement désigné sous le nom de *momification*.

B.—Les uns continuent à préférer, comme mode de préparation de la pulpe, la vielle escharification arsénicale et même (Mahé) à tenir à une certaine *imprégnation* arsénicale, comme condition essentielle d'un succès total et parfait.

Les autres (Américains actuels) déclarent ce procédé "périmé" et n'admettent que l'anesthésie vraie comme moyen d'aborder et de réséquer la pulpe.

Ces diverses variantes peuvent se combiner entre elles. Nous examinerons ici, comme opération-type, l'*amputation vraie*, après préparation arsénicale, tout en signalant au cours de l'exposé les autres méthodes.

Mode opératoire: Amputation vraie, 1^{re} séance.—Une bonne manière de faire — dans tous les cas qui s'y prêteront, mais qui n'est pas strictement obligatoire — sera de procéder d'abord à une anesthésie de la pulpe *par compression*. Cette anesthésie obtenue permettra d'abord un nettoyage parfait de la cavité cariée et l'excision de tout le tissu dur infecté, ensuite de mettre franchement à nu la partie atteinte de la pulpe, même de pénétrer légèrement dans son parenchyme, et par conséquent de placer le pansement arsenical dans des *conditions parfaites*, tant du point de vue de l'efficacité réelle que de la prophylaxie des complications attribuées à l'arsenic.

Deux variantes s'opposent quant à l'agent escharotique.

Le promoteur de l'opération, Herbst, avait considéré comme un point essentiel de celle-ci le rejet de l'anhydride arsénieux et l'emploi exclusif du *cobalt*, ou biarséniure de cobalt. De nombreux opérateurs sont restés strictement fidèles à cette manière de voir.

Une longue observation m'a amené à considérer que les motifs en étaient beaucoup plus théoriques que réels. Depuis de longues années, je suis revenu à l'anhydride arsénieux, sans avoir jamais remarqué *rien* qui pût marquer une différence appréciable dans les résultats. J'ai donné antérieurement la formule (2) à laquelle je me suis arrêté et pour laquelle je ne vois à signaler qu'une précaution particulière: il est prudent de ne pas laisser trop vieillir la préparation et de la renouveler au moins tous les ans, tous les six mois étant mieux encore.

Une boulette, grosse comme une petite tête d'épingle, sera placée exactement sur le point pulpaire dénudé, où elle doit adhérer seule, recouverte d'un minime pansement ouaté, légèrement comprimé, et d'un ciment provisoire. L'eugénate de zinc me paraît à éviter dans ce cas.

Ce mode de faire a été indiqué comme "non scientifique", la dose d'arsenic employé n'étant pas pondéralement déterminée. La méthode est en effet "clinique". Mais la dose réelle de l'escharifiant, reçue par la pulpe, étant *surtout* fonction de la surface

(1) Les Allemands cependant assurent actuellement réussir ces conservations par "traitement biologique".

(2)

Anhydride arsénieux finement porphyrisé	2 gr.
Novocaïne	2 —
Scufoforme	3 —

Vaseline, ou lanoline, colorée au rouge de Bordeaux ou au rouge Soudan, q. s. pour obtenir une masse à consistance de beurre ferme (*Semaine dentaire*, 24 mai 1936).

d'application et du pouvoir d'absorption propre de l'organe, la préoccupation ultra-scientifique paraît assez théorique.

Le temps optimum d'application sera de trente-huit à quarante-huit heures. Il pourra, en cas de nécessité, être réduit à vingt-quatre heures. Sans qu'il soit possible d'alléguer à l'appui de cette recommandation des motifs précis, et quoiqu'elle puisse être souvent transgressée sans catastrophe certaine, il sera prudent de ne pas porter au delà de trois jours la durée d'application du caustique.

2^e séance.—La caractéristique essentielle de cette séance, *c'est la propreté*. Disons *asepsie*, pour satisfaire à la terminologie actuelle. Mais que la propreté soit absolue en tout, telle est l'indication dominante.

Le matériel opératoire aura donc été stérilisé dans son ensemble et il ne faudra pas oublier d'y comprendre la *substance de coiffage des radicules*.

I.—Le champ opératoire devra être parfaitement nettoyé, la dent et ses alentours aussi aseptisés que possible. Tous les antiseptiques sont bons. Je préfère volontiers le savon liquide, suivi d'une large irrigation de la bouche à l'eau oxygénée et complétée par une friction au "mélange ternaïre".

Alcool	} ââ
Ether	
Chloroforme	

Puis la *digue* sera placée. Cette manœuvre n'est plus de mode. C'est cependant pour nous le *seul* moyen de maintenir un champ opératoire à l'abri d'une fuite possible au cours de l'intervention. C'est également, malgré les apparences, une façon de *gagner du temps*, par la suppression du temps perdu en une foule de gestes inutiles.

La digue placée, une nouvelle et soigneuse stérilisation de la dent et sa voisine (celle qui fait face à la cavité s'il s'agit d'une carie proximale) au "mélange ternaïre" sera pratiquée.

II.—*A ce moment seulement*, le ciment provisoire et le pansement escharification seront enlevés. Détersion de la cavité au mélange ternaïre. Nettoyage mécanique des parois à la fraise. Lavage au mélange ternaïre.

III.—*A ce moment seulement*, on pénétrera dans la chambre pulpaire avec des fraises stérilisées. La chambre sera largement ouverte et tout le *tissu pulpaire caméral* excisé est enlevé. Les fraises aplaties, en "forme d'oignon", qu'on ne trouve plus que difficilement dans le commerce, étaient les meilleures pour ce temps. Mais le nettoyage de la chambre sera achevé avec des fraises en "cône renversé", pour obtenir, au niveau de l'infundibulum des canaux, une section des radicules aussi nette que possible.

De fréquents lavages au mélange ternaïre auront été pratiqués, s'il l'a fallu, au cours de ce temps. Dans tous les cas, la chambre pulpaire sera *soigneusement* détergée avec ce liquide et minutieusement nettoyée de tout débris pulpaire avant d'aller plus loin.

S'il y a hémorragie (assez rare aux dents multiradiculées et dans l'amputation telle qu'elle est indiquée ici), un tamponnement soigneux avec le même liquide en aura presque toujours raison. S'il est absolument rebelle, ON PASSERA OUTRE, en prenant seulement soin d'aller *aussi vite que possible* entre l'ablation du dernier pansement et l'application de la substance de coiffage.

Dans tous les cas, un pansement imprégné de même liquide sera maintenu dans la chambre pendant la préparation du temps suivant.

IV.—Celui-ci est constitué par le *coiffage des radicules sectionnées*.

Herbst employait à cet effet l'ETAIN STERILISE, et rien d'autre. L'excellence des résultats est extrêmement précieuse pour éclairer la situation et "situer" les conceptions différentes qui se sont proposées pour l'expliquer.

Pour des raisons de pure pratique que j'ai exposées ailleurs, j'ai renoncé à ce procédé idéal, contre lequel nulle objection de principe ne peut être élevée, pour recourir à l'eugénate de zinc, substance très injustement incriminée à mon sens par les auteurs de langue et de conception allemandes.

L'eugénate de zinc pur, et préparé avec des substances stériles, est *suffisant*. C'est, pour moi, une substance de coiffage *parfaite*. Par prudence, on y peut ajouter une petite proportion de *scuroforme* (qui pourra être précieux contre certaines petites douleurs postopératoires qui inquiètent inutilement le sujet et l'opérateur) et un peu d'*airol* (gallate d'oxyiodure de bismuth), antiseptique faible, absolument non irritant et permanent.

Après un dernier lavage de la chambre au mélange ternaire et assèchement modéré (ne pas *cuire* la surface de section!) à l'air chaud, les radicules sont soigneusement coiffées de cette pâte, minutieusement tassée en place et qui ne doit pas déborder sur les parois de la chambre. La surface de cette pâte est légèrement desséchée à l'air chaud et recouverte *immédiatement* d'une couche de ciment à l'oxyphosphate qui devra être *bien adhérente* aux parois de la cavité.

Toute l'opération, pratiquée dans ces conditions exactes, répond à la définition d'*amputation coronaire* de la pulpe. Seuls peuvent être mis au passif de la méthode les échecs qui pourraient être enregistrés dans le cas où ce protocole opératoire aura été *exactement* suivi.

Les caractéristiques en sont nettes: *Opération en un temps, abstention totale de tout agent chimique "modificateur"*. Par conséquent: *pas de pansement* entre l'ouverture de la chambre pulpaire et l'obturation définitive.

V.—L'opération pourra être terminée selon deux variantes entre lesquelles on pourra choisir, pour des motifs particuliers à chaque cas, et qui ne tiennent pas aux indications opératoires.

Si l'intervention a été correctement menée, il n'y a *aucune raison de ne pas pratiquer immédiatement l'obturation totale et définitive* de la cavité, si on a décidé de la faire avec une substance plastique. Si la couche de ciment qui clôt la chambre pulpaire est vraiment hermétique, on peut se contenter d'une obturation provisoire (de préférence en gutta-percha dure), afin de procéder à une restauration par substance incrustée ou par couronne d'or ou de porcelaine.

Les suites opératoires doivent être *nulles*.

S'il s'en présente, c'est qu'il y a faute, ou erreur, sur quelque point.

Un peu de *péricementite* (elle sera souvent consécutive au pansement escharotique et antérieure à l'amputation) sera presque toujours le signe que la pulpe n'était pas aussi "fraîche" qu'on l'avait cru et qu'elle était atteinte d'un léger degré de subinfection.

Quelques douleurs, légères et fugaces, ou sérieuses et persistantes, secondaires, seront généralement l'indice d'une *escharification insuffisante* (on s'en sera d'ailleurs rendu compte au cours même de l'amputation). Cette *névrite résiduelle* est beaucoup plus à redouter que l'*infection*, à laquelle on pense seule, si l'opération a été faite correctement et sur un diagnostic exact quant à l'état réel de la pulpe. Si cette névrite est accentuée et durable, elle peut constituer l'échec total et oblige à reprendre le traitement de toutes pièces pour achever par une "ablation totale". Une *bonne escharification* demeure donc la condition première du succès.

Dans tous les cas où quelque suite postopératoire de ce genre aura été, même légère, enregistrée, il y aura lieu de faire une réserve sur le sort lointain (six, huit, dix ans) de la dent. On enregistrera peut-être alors, soit une gangrène des radicules, soit, le plus souvent, un accident apical (granulôme ou rhizalysé). Dans tous les autres cas, l'avenir de la dent est un des plus sûrs que nous puissions obtenir.

Momification.—Ceux qui se rattachent à cette autre manière d'envisager l'opération

partent de ce principe informulé qu'il est impossible de conserver vivantes les radicules sectionnées si on ne leur fait subir, ou tente de leur faire subir, une véritable transformation cellulaire. On a jadis parlé "d'embaumement", et ce fut la conception de Witzler avec sa pâte à l'iodoforme (qui connaît actuellement un semblant de regain). L'embaumement a mené à la "momification", sorte de "fixation" histologique des cellules, dessiccation, ratatinement du tissu. Le sublimé, le tanin ont été particulièrement utilisés dans ce but. L'agent à peu près uniquement employé actuellement est le formol, sous sa forme polymérisée de trioxyméthylène.

Introduit, semble-t-il bien, par Pitsch, le premier en France, il est surtout employé à l'étranger par des moyens qui ne s'écartent guère de la formule donnée par Gysi:

Tricrésol	10 cmc.
Créoline	20 cmc.
Glycérine	4 cmc.
Trioxyméthylène	20 gr.
Oxyde de zinc	60 gr.

Le mode opératoire ne se distingue pas essentiellement de celui qui a été décrit plus haut, la différence, mais elle est fondamentale, réside tout entière dans la substance de coiffage des radicules.

Dans cette méthode, comme dans l'autre, un pansement intercalaire entre l'amputation et le coiffage et l'occlusion est une *hérésie* qui paraît à peine concevable.

Préparation de la pulpe par anesthésie.—Deux procédés:

a) Anesthésie par compression à l'aide d'un anesthésique sirupeux, comme le liquide dit, à tort, de Bonain, ou comme le "Siderol", dont j'ai antérieurement donné la formule:

b) Par injection apicale d'un anesthésique courant, presque toujours aujourd'hui l'association novocaïne-adréraline. Rien de particulier dans l'injection.

De ces deux procédés, le premier (le moins employé) me paraît encore le meilleur.

D'une façon générale, et en contradiction formelle sur ce point avec l'Ecole américaine moderne, je rejette l'anesthésie pour l'amputation coronaire, pour les motifs suivants:

a) Manœuvre complémentaire, au moins inutile et plus longue durée, inutile également, de la séance opératoire;

b) Application de la méthode, avec succès *certain*, à un nombre trop limité de dents;

c) "Intoxication" inutile du sujet. (Certains patients ont une susceptibilité excessive à l'adrénaline, ou même à la novocaïne.)

d) (la plus grosse objection). Fréquence, selon moi, *beaucoup* plus grande et de l'intolérance (névrite résiduelle) postopératoire et des accidents apicaux lointains.

Mais ce sont là des appréciations personnelles sur lesquelles les préférences demeurent libres.

Il convient encore de mentionner pour être complet que l'anesthésie tronculaire et même l'anesthésie générale ont été recommandées pour cette petite opération.

Bureau à vendre

Le docteur Ernest Laurence, très pris dans le service militaire, désire vendre son bureau situé à 12345 est, rue Notre-Dame, Pointe-aux-Trembles.

Prière de visiter l'avant-midi de préférence.

Revue des Revues

HEMORRAGIES DENTAIRES, par le DOCTEUR FLURIAN. (*Gazette Hebd. des Sciences médicales de Bordeaux*, n° 28.)

L'auteur a mis en pratique le procédé suivant, qui lui a réussi dans tous les cas : un morceau de coton hydrophile dépassant largement en tous sens la surface cruentée, d'épaisseur de 2 à 3 mm., imprégné de collodion est appliqué à cheval sur l'arcade dentaire et moulé comme un plâtre avec les doigts. Ce travail n'est pas toujours aisé à exécuter : le sang arrivant à flots empêche la parfaite adhésion ; les réflexes du patient compliquent la situation. Chez les malades particulièrement nerveux, il peut être prudent de placer entre les arcades dentaires, du côté opposé à la plaie, un corps dur, un bouchon par exemple, pour éviter la fermeture intempestive et brusque de la bouche et la morsure des doigts.

Au pansement local doivent être adjointes les piqûres d'ergotine et l'absorption par voie buccale d'ampoules hémostatiques.

Le malade est laissé au lit, couché sur le dos, la tête haute, il lui est recommandé d'éviter tout mouvement soit de la face, soit de la gorge, soit de la langue. L'alimentation sera liquide et froide, au moyen d'un bec de canard, sans déplacement de la tête.

La seule complication consiste dans le décollement prématuré du pansement et la reprise violente de l'hémorragie : il en fut ainsi deux fois de suite en l'espace de douze heures chez une des malades du Docteur Flurian, ce qui demanda trois applications successives.

A la guérison de la plaie opérative, généralement au bout de deux à quatre jours, le pansement collodionné se rétracte et tombe spontanément.

UN PEU DE STATISTIQUE (*Dental Journal*, Décembre 1937).

Nous avons publié sous ce titre, au mois de décembre 1935, une statistique d'après le "Contact Point" qui fut, après la classification que nous en avons faite, reproduite par de nombreuses revues françaises et étrangères.

Voici maintenant, d'après le "Dental Journal" paraissant à Weinfelden (Suisse), une autre statistique concernant la répartition des dentistes dans les différents pays du monde ainsi que dans un certain nombre de villes importantes.

PAYS	Population	Dentistes	Nombre d'habitants par dentiste
Etats-Unis	123,000,000	80,000	1,287
Nouvelle Zélande	1,400,000	820	1,707
Autriche	6,760,300	3,526	1,916
Allemagne	66,627,400	31,584	2,109
Suisse	4,144,000	1,932	2,196
Monaco	25,000	10	2,500
Lettonie	1,950,500	550	2,550
Canada	9,850,000	3,571	2,760
Grande-Bretagne	46,681,000	14,800	3,154
Uruguay	1,950,000	600	3,250
Lichtenstein	15,000	4	3,750
Tchécoslovaquie	15,170,000	3,936	3,828
Grèce	6,588,000	1,700	3,875

Section Française

Norvège	2,885,000	720	4,007
Lithuanie	2,464,000	550	4,116
Japon	65,000,000	15,573	4,173
Brésil	39,700,000	9,000	4,420
Danemark	3,705,500	820	4,520
Argentine	13,000,000	2,800	4,650
Chili	4,350,000	800	5,626
Suède	6,239,100	1,050	5,942
France	41,982,000	7,000	5,997
Luxembourg	304,900	50	6,098
Hongrie	8,895,000	1,400	6,354
Bulgarie	6,050,000	950	6,370
Esthonie	1,300,000	200	6,500
Syrie	2,400,000	350	6,856
Finlande	3,730,000	472	7,902
Cuba	3,600,000	450	8,000
Union Sud-Africaine	7,000,000	775	9,020
Belgique	8,276,000	900	9,200
Roumanie	18,652,000	1,800	10,307
Pologne	33,823,000	3,137	10,781
Islande	112,000	10	11,200
San Salvador	1,430,000	120	11,916
Colombie	8,000,000	650	12,300
Hollande	8,455,000	680	12,573
Italie	42,420,000	3,200	13,070
Portugal	6,826,135	476	13,340
Pérou	6,150,000	450	13,666
Yougoslavie	14,180,000	1,050	14,600
Paraguay	1,000,000	65	15,375
Haïti	2,030,000	120	16,916
Nicaragua	700,000	40	17,500
Espagne	23,050,000	1,200	19,208
Albanie	1,003,000	39	25,700
Turquie	13,600,000	500	27,200
Venezuela	3,100,000	90	34,444
Russie	165,000,000	4,500	36,666
Egypte	14,220,000	340	41,800
Mexique	15,000,000	350	42,857
Indes	350,000,000	5,000	70,000
Irak	2,850,000	30	95,000
Siam	11,500,000	75	153,333
Perse	12,000,000	50	240,000
Indes Hollandaises	53,520,680	208	257,310
Chine	433,000,000	500	866,666

VILLES	Population	Dentistes	par dentiste
Vienne	1,870,000	1,858	1,006
Oslo	260,000	250	1,040
Rio de Janeiro	2,000,000	1,500	1,333
Buenos-Aïres	2,200,000	1,500	1,466
Paris	3,000,000	2,000	1,500
Leningrad	1,500,000	900	1,666
Santiago de Chili	506,495	300	1,688

Athènes	850,000	508	1,694
Montévideo	600,000	350	1,714
Copenhague	729,214	400	1,823
Montréal	1,077,000	563	1,912
Zurich	312,000	150	2,080
Luxembourg	46,709	22	2,123
Lima	300,000	130	2,307
Milan	900,000	368	2,445
Budapest	1,000,000	400	2,500
Rome	800,000	310	2,580
Breslau	557,139	184	3,027
Kustrin	19,383	6	3,230
Hambourg et Altona	1,298,000	390	3,328
Bruxelles	1,000,000	300	3,333
Berlin	4,200,000	1,135	3,700
Lubek	112,000	28	4,028
Lisbonne	579,524	141	4,110
Mexico	610,000	140	4,357
Dusseldorf	432,633	99	4,370
Barcelone	710,355	160	4,439
Cologne	710,000	144	4,930
Asuncion	100,000	20	5,000
Amsterdam	760,000	124	6,129

A. AMOEDO.

Le Congrès de Québec

A cause des circonstances toutes spéciales qui entoureront le prochain congrès de Québec, il y a tout lieu de croire que presque tous les dentistes de la province voudront y être.

De plus on me dit que les organisateurs sont assurés de la présence de plusieurs confrères Américains.

Il s'est fait, ces toutes dernières années, et plus particulièrement l'an dernier, d'assez extraordinaires découvertes scientifiques dont, paraît-il, on nous fera part en cette occasion. On nous dit qu'une d'elles constitue une véritable révolution en prothèse. Qu'elle est-elle, il n'y aura rien pour le savoir comme d'assister au congrès.

Le Dr Fred. R. Adams de New York, conférencier au prochain congrès à Québec, traitera le sujet suivant: "Les traitements de canaux et l'emploi de la sulfanilamide". Le docteur Adams est un gradué du Collège de Philadelphie en 1894. Il fut président des cliniques de la Société Dentaire de New York et de l'Association Dentaire Américaine. Conférencier et clinicien sur l'anesthésie et les traitements radiculaires, il a écrit de nombreux articles qui ont été publiés dans les principales revues médicales et dentaires. C'est donc une autorité très compétente sur le sujet, que les congressistes auront l'occasion d'entendre au prochain congrès.

La rédaction.



—By Courtesy of the Canadian Pacific Railway Company.

LAKE LOUISE

Lake Louise is the pearl of the Canadian Rockies. It was discovered in 1882 and named after Princess Louise, wife of the Marquis of Lorne, then Governor-General of Canada. Here is a panorama of snowy heights, brilliant poppies, mountain flowers, terraced gardens, massive peaks, blazing sunsets and cool green forests—the glittering slopes of glaciers against a sky of intense blue. The altitude is 5,680 feet above sea level.



L. J. D. FASKEN, D.D.S.,
Regina, Saskatchewan.

Secretary of the Council of the College of Dental Surgeons
of Saskatchewan.

Elected Secretary of the first Council of the College after the
Province was formed in 1907, and has held this position
ever since, and six years ago was made permanent
secretary at the pleasure of the Council.

Graduate of the Royal College of Dental Surgeons
of Ontario in 1905.

Delegate to the Canadian Dental Association from Saskatchewan.

Representative from Saskatchewan to the Canadian Dental
Hygiene Council.

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

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NO. 4

Practice Building and Management*

by WILLIAM MILLER, D.M.D., Vancouver, British Columbia

IF YOU will be content to listen to the story of a very average dentist, one who has enjoyed a certain measure of success, but who certainly is no Dale Carnegie, then I shall do my best to make that story as interesting as possible. And when I say "average", I mean just that. If your idea of a highly successful practice is to treat five or six patients a day, work leisurely from nine to five, and draw a net income of ten thousand a year, then your idea is the same as mine, and I am definitely not in that class. I work like a Chinaman from nine to six, and my net income falls short considerably, of the required ten thousand.

However there is much to be said for the Chinese philosophy of "The Golden Mean", which proposes that a man is happiest when he is not too rich, nor too poor, neither too fat nor too thin, neither too short, nor too tall; that the middle road is usually the best.

H. G. Wells, in the introduction to "The Outline of History", expresses the idea I would like to convey. In apologizing for attempting to write a history, when he was not an expert historian, he says that perhaps he was better fitted for the job on that account. Because the real scholarly historian was so buried under a mass of detail, and walked so constantly

in fear of putting down a wrong date, which would ruin his reputation, that he was incapable of writing a history which would be of real practical value to the man in the street.

And so it is, that perhaps what I have to offer will be of some practical value, because it will have a minimum of technical detail and is culled from the experience of an average practice.

ATTRIBUTES OF A DENTIST

If dentistry were depicted in the form of a rectangle, the four sides might be designated as "mechanics", "aesthetics", "public relations", and "economics". Very rarely would one find these characteristics so evenly distributed in one man, as to form a perfect square. If one dentist did possess all these qualities to a great degree, then he would be an outstanding man in the profession. But most of us have a short side or two, which makes the rectangle a very irregular figure, and it may be possible by a little analysis and self-examination to straighten things up a bit.

What happens, when a dentist is predominantly mechanical, to the exclusion of the other qualities? His work endures for years on end, but is an eyesore to all who behold the patient's mouth.

And what of the artist? His bridge-work looks wonderful and his dentures

* Presented before the Vancouver Dental Society, December, 1940.

defy detection, but the bridgework falls out when the cement has all dissolved and the patient removes his dentures to eat.

The dentist who is strong on the public relations aspect, usually has personality-plus, and manages to maintain a practice, simply because people like him. The patient returns time and again to have the work replaced, but does not mind, because he always enjoys the visit.

And then the economics expert! This type makes dentistry a business, rather than a profession, and a great many of these are to be found in advertising offices. It is readily perceivable that not one of these men is likely to establish a really successful practice. Balance is what is required, and the man who has balance, even though he may have only average ability, need have little to fear in making a comfortable living in dentistry.

ACHIEVING BALANCE

What then can a man do to achieve this condition of balance?

For the development of mechanical ability, I know of no better way than a constant application to study club work. I have found that association with men, highly skilled in the mechanics of dentistry, has been of immense value to me. It has meant a considerable expenditure of both time and money, but the returns have been most gratifying.

Even more than mechanics, the aesthetic side of dentistry is largely a gift. But even this gift can be cultivated, by a study of dental anatomy and shades and colourings. In my own office, I make it a regular practice to call in the office assistant, when selecting tooth shades. So frequently a woman will have a better eye for colour and shadings than a man.

Public relations:—Many a practice has been gradually broken down by the disagreeable behaviour of the dentist. People will endure this sort of thing for a time, but inevitably it will catch up with the

offender. And the pathetic part of it is, that when the surly one realizes that his practice is gradually slipping away from him, it becomes increasingly hard to be pleasant. But be pleasant, we must. The patient who comes into one's office is handicapped from the start. He is there under duress, against his will. Treat him with a warm friendliness, which above all, must be sincere. This goes a long way towards relieving his anxiety, and will make him a much more tractable patient.

A patient of mine once had occasion to visit another dentist. In recounting the visit afterwards, she said that when she walked into the office he glared at her as if to say, "Well, what do you want?" She was glad to get out of his office, and very pleased that she did not have to return.

Before going on to the subject of economics, it might be well to mention here, the matter of good health. Dentistry is a very exacting profession, requiring a steady hand, a keen eye, and a pleasant, tranquil disposition. These attributes are very difficult to achieve, after an all-night session with the poker chips, or a bout with Bacchus. Have fun, certainly, but in moderation. If dissipations are carried to the point where they begin to endanger the health, then the practice is bound to suffer in proportion. A successful practice demands good health.

In considering the economic aspect of dentistry, we might divide it into three phases; viz., contracts, collections, and book-keeping. Let us consider the book-keeping first. Every office should have a complete set of books, and by complete, I do not mean elaborate. They should be reduced to the simplest form, which will still give you the information you require. To make a long story short, and without confusing you with too much detail, let us say that you want to know your gross receipts. You want to know your costs, and by simple arithmetic, you have your

WILLIAM MILLER



net income. Under costs, you want to know the proportion of overhead, what your materials cost, laboratory fees, and don't forget the column for miscellaneous, which covers a multitude of sins. A record should also be kept of money invested in equipment. It is hardly necessary to mention that an individual record should be kept on file for every patient, showing the work done, and the financial account.

Let your assistant keep the books. Any intelligent girl can do this in her spare time, and make up a monthly statement of profit and loss.

Contracts and collections:—You will notice that I group them together, because I believe that the time to start collecting is at the time the contract is made. By that I mean that a frank discussion should take place between patient and dentist, regarding the work to be done and the arrangements for paying for it.

If the patient has any objection to the cost, now is the time to hear about it, not after the work has been done, and hard feelings are aroused, by the effort of the dentist to collect.

FEES

At this point it might be expected that I would embark on a discussion of the matter of fees, but I have no intention of entering upon such a hazardous undertaking. In my younger days, when listening to a group of fellow dentists discussing the matter of fees and each telling very modestly of receiving a thousand dollars for dentures, fifty dollars a tooth for bridgework, and a hundred dollars for inlays, I returned to my office with a feeling of defeat and humiliation, at my feeble efforts. But time mellows all things, and experience is a great teacher. Gradually I became aware that even though

these men might have the occasional patient who was quite willing to pay a very high fee, their net annual income was less than my own. And after all, it is the final score that really counts.

Each one of us, if he is honest, can place his valuation of his work within a certain range, having a minimum and a maximum. Just whether the minimum or maximum fee is obtained will depend upon the patient with whom he is dealing. The ability of the patient to pay is a very important factor, and one which calls for a great deal of acumen on the part of the dentist. Failure to recognize this factor is responsible for a great many of the bad debts, which dentists have on their books. While to the layman, it might seem unjust to charge one man ten dollars for a gold inlay, and another man fifty dollars, it is not quite so unfair as it might seem. The valuation we place upon money is largely relative. The man with the ten-thousand-dollar-a-year income will think very little of writing a cheque for fifty dollars for having his tooth fixed, while to the man raising a family on thirty dollars a week, this amount would be staggering, although he could pay ten dollars, with a little effort. Yet both men would rest well content, knowing that they had achieved the best that they could afford. Furthermore, if the ten-thousand-a-year man were asked to pay only ten dollars, he would very probably feel that he was getting an inferior restoration.

It is well to know the minimum fee which can be charged, as shown by the information in your books. The maximum fee is a matter of the financial standing of the patient, and your own conscience. Be ethical, and by that I mean be honest. You know what your work is worth, and anything beyond that is yours only by virtue of the fact that you have not been found out.

PSYCHOLOGY

And now we come to a little heavier train of thought—the psychological aspect of dentistry. This comprises a multitude of little things which take place from day to day, between patient and dentist. There is a right way and a wrong way of going about our contacts with patients; the right words to use, the right attitude and manner to adopt; little things, which of themselves seem trivial and unimportant, but in the aggregate, make the difference between success and failure.

I can do no better, I think, than refer to an article which appeared in the July number of the *Journal of the Michigan State Dental Society*, written by Dr. Louis R. Hill, of Los Angeles, California. This article is entitled "Psychological Principles, which Promote Professional Practice."

In brief, this article enumerates the various little things which go to gratify in the patient, that very human characteristic, which is generally recognized—a sense of his importance. The patient enters the reception room. The sound of the buzzer should scarcely have died away before the assistant or dentist should be out to see who the caller is and the nature of his business. Try to keep your appointments on time, but if it is necessary to keep the patient waiting, take time to explain that you are running behind time but will attend to him as quickly as possible. If you have a patient in the chair, close the reception room door, so that he will not hear you tell the new patient that you are speeding up. Go back into the operating room and treat the patient in the chair, as though you had all the time in the world. Speed up, without letting him be conscious of it.

Do not make the mistake of trying to impress the patient that you are a very busy man, by keeping him waiting unnecessarily. If you are really busy, let him get a glance at your appointment

book. If your appointment book will not stand the scrutiny, use a little finesse in making his next appointment, by making it a few days hence. This is a much more effective system.

The patient is now in the chair, and still bearing in mind our eternal ego, appeal to his desire to appear well in public. Personal appearance will have a much stronger appeal for some people than others, but this is readily discernible. In some the self interest will centre around the desire for comfort, then this phase should be stressed. In others, the motive of economy will be a deciding factor.

Talk with them, chat with them, and keep your eyes open, and it does not take long to determine which way they are inclined. But never let your conversation drift very far from the subject in hand, which is dentistry. That is the purpose for which they are there, and the thing which must be gone over and thrashed out thoroughly, before the patient leaves.

Dr. Hill suggests that our choice of vocabulary should be given some thought. The word "extract", he thinks, is harsh, and prefers the word "remove". My personal inclination is to say, casually, "Well, perhaps we had better slip that one out", as though I were just about to take off a shoe. Just how much "slipping" the tooth will do is a matter of conjecture, but then the patient won't start worrying about that, until the job is well on to completion. And perhaps by that time, we'll both be working so hard that we shan't have time to worry.

After a difficult extraction, in which post-operative complications are expected, do not wait for the patient to 'phone you next day, and say that he is half dead. 'Phone him first and enquire as to his welfare, and instruct him as to what he should do. This has a double value. In the first place, the patient is conscious of the fact that you are interested in his

welfare. And in the second place, if the case should be serious, it gives you a good start in the treatment.

Again Dr. Hill suggests that we say "porcelain jacket", rather than "porcelain jacket crown", and "three-quarter inlay", rather than "three-quarter crown". To a great many people the word "crown" still suggests the golden buckets which were slung over teeth, a quarter of a century ago.

One more example. How would you like to have the enamel "stripped off a tooth". It suggests "skinning alive". Spare the patient's feelings by saying that you are going to "prepare the tooth" rather than "strip".

From this you will gather that it will help us immensely if we use words and phrases, accompanied by the proper manner, which will make the patient feel more at ease and more comfortable.

We have touched on the ideas of enhancing the patient's feeling of importance, and the use of proper words and phrases, but there is one other psychological aspect, which is of paramount importance, and which when absent, might easily nullify the other two. That is the poise and self-assurance of the dentist. To the young dentist, so conscious of his shortcomings and scanty knowledge, this is very difficult of attainment. It takes time, and a gradual accumulation of knowledge and experience, to develop poise and a calm self-assurance, which are really necessary, if we are to merit the patient's full confidence. Here again good health is decidedly a contributing factor.

Generally speaking there are two things which keep people away from the dental office, and both are fears; fear of pain, and fear of expense. Whether or not they retain that fear of expense, after visiting your office, will depend on how successful you are in educating them to what dentistry can do for them, within the means at their disposal.

Whether or not they retain their fear of pain, will depend on your operative skill. With our present knowledge of anaesthetics, and the materials at our disposal, I think that I am quite safe in saying that at least ninety-five percent of all dental operations should be performed painlessly. Any time that I hurt a patient needlessly, I feel that I am not performing up to standard. And yet it is amazing the number of patients who present themselves for treatment, who have never had a tooth anaesthetized for cavity preparation.

DENTAL ASSISTANT

This story would not be complete, were I not to pay tribute to the dental assistant.

During my college days I spent six weeks, through Eastern Oregon and Idaho, endeavouring to increase the circulation of a certain well-known magazine. In Boise I entered a dental office, which seemed to be up to the minute, in every way. It was lunch time, and I chatted with the dentist. During the conversation, he remarked that a good office assistant was worth her weight in gold, and I have every reason to believe that to be true. Invariably, when

I ask a man, why he does not employ an assistant, he will reply that he cannot afford it. It would take but six months' experience working with an assistant, to prove to him that he cannot afford to be without one. She is as essential as light and heat. We can get along without both, but not if we are to work in comfort.

CONCLUSION

In conclusion let me say that every dentist in British Columbia should be making a comfortable living. There is more work to be done than can possibly be attended to by the present number of dentists. If any dentist is having a difficult time, he will find, very probably, that it is not on account of the number of patients that come into his office, but the number that go out, never to return.

The public's estimate of a man's ability as a dentist is based on three very simple propositions; viz., can he extract a tooth painlessly? do his fillings stay in? and do his plates fit?

But this is hardly sufficient, if we are to enjoy a prosperous practice. To be successful, we must have at least a working knowledge of those other factors, which I have attempted to enumerate, in this brief dissertation.

Conventions

74TH ANNUAL CONVENTION OF THE ONTARIO DENTAL ASSOCIATION, ROYAL YORK HOTEL, TORONTO, ONTARIO, MAY 19-21, 1941.

Dentists from the United States and from all parts of Canada will be welcome.

WESTERN CANADA DENTAL SOCIETY, EDMONTON, ALBERTA, JUNE 2-4, 1941.

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.

Secretary, A. D. Richardson, 1240 Union Avenue, Montreal.

AMERICAN DENTAL ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

17TH ANNUAL SESSION OF AMERICAN DENTAL ASSISTANTS ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

General Secretary, Aileen M. Ferguson, 708 Centre Street, Jamaica Plain, Mass.

Early Symptoms of Periodontal Disease— How May They Be Recognized?*

by C. ALVIN SNELL, D.D.S., Toronto, Ontario

THE question implies that the person asking it is seeking to render to his patients such periodontal service as lies in his power. This is most desirable, and for the following reason. If the public is to be protected against the insidious ravages of periodontal disease, the general practitioner of dentistry must assume a greater responsibility than exists at the present time. Too often in the development of his really splendid technical procedures, he has allowed his attention to be focused entirely on the crown of the teeth. To correct this most deplorable condition, he must become not less of a mechanic but more of a diagnostician.

But now that he has asked the question under consideration, and has thereby manifested a concern for the maintenance of the health of the supporting structures of the teeth, what should he be looking for, if he is to properly discharge his obligation in this regard?

In bulletin No. 7 written by Harold K. Box under the title "Studies in Periodontal Pathology" there will be found an explicit and concise description of twenty signs of the early symptoms of periodontal disease. In our present and brief presentation of this subject, it will suffice to stress some of the most obvious and important ones, along with certain suggestions in dealing with them.

One of the most important of these is mobility. This may be determined by asking the patient to place his teeth in centric relationship, and then to make the various lateral and protrusive movements

of the mandible, the dentist at the same time to put his finger on the labial or buccal surfaces of the teeth under observation. If mobility is thus found, the patient will be impressed if requested to place his own finger in position indicated, when he may feel for himself the mobility which you have already detected. By this means there will be created in the patient's mind a much more acquiescent attitude to the occlusal corrective measures which are required, but for which the average individual has a particular aversion. Radiograms which may show even a slight breaking down of the alveolar crest will also serve to educate the patient.

Next look for any change in colour or contour of the gingivae. And departure from normal is to be regarded as pathological. Digital pressure on the gingivae is a valuable diagnostic aid. Haemorrhage on such pressure indicating a mild gingivitis, or exudate from a pocket may be thus revealed.

Further search for pockets by means of a suitable diagnostic probe is of paramount importance. Remembering that a gingival crevice of from 1 to 2 mm. in depth is regarded as normal, anything beyond this is to be looked upon with grave suspicion, and indicates at least a corresponding loss of the alveolar process. One who has not been consistently hunting for pockets may be astonished at the number which may be thus revealed, even in a mouth which, on superficial examination, appears to have healthy gingivae. To simplify our search for

* A contribution to the symposium on periodontia presented at the Annual Winter Clinic of the Academy of Dentistry, Toronto, December, 1940.

pockets, a diagnostic probe which is capable of reaching all surfaces is to be preferred.

Again it will be found that showing the patient some of the pockets will arouse his interest, and materially assist in securing his necessary co-operation in gingival massage.

PROPHYLACTIC SERVICE—What Constitutes Adequate Treatment?

This question is very closely linked with the one with which we have just dealt. It is obvious, that a so called cleaning of the teeth which is concerned only with the removal of stains and calculus from the exposed portions of the teeth is all too inadequate. It can be not only inadequate but absolutely dangerous, in that it may create in the mind of the patient a false sense of security. Since the term prophylaxis essentially means an operation which has for its object the prevention of disease, an oral prophylaxis which is worthy of the name involves a very high degree of responsibility.

In addition then to the usual scaling and polishing, a careful search must be made for subgingival calculus which must be painstakingly removed. The diagnostic probe must be carefully used to test the depth of the gingival crevice around every tooth. It will also serve to detect particles of calculus which the scaler, plane, curette or file may have failed to remove. The occlusion should from time to time be checked. When a patient is receiving prophylactic care two or more times a year, it will certainly not be necessary to make alterations in the occlusion each time. But the fact that it can become damaging must always be remembered. It should, therefore, be watched and dealt with when necessary.

This is not too much of a program when you remember that you are responsible for the maintenance of the health

of both the teeth and their supporting structures. The patient has a right to expect this of you and the dentist is derelict in his duty who does not so discharge it.

BLEEDING OF THE GINGIVAE—What is its significance?

Bleeding of the gingivae is not to be treated lightly. It can signify some serious systemic disturbance, but generally is due to local factors. The local sources of irritation are well known, while the systemic are more or less ignored.

Under the local factors may be listed any mechanical source of irritation such as overhanging margins of fillings, calcareous deposits and food impaction. Careless tooth brushing permitting food debris with accompanying bacteria to remain at the gingival margin is one of the most frequent causes.

Specific infection by the spirochetes and fusiform bacilli is often overlooked in many cases of low grade infection. Such cases call for the same treatment as would be given to one of acute fusospirillary gingivitis, with less emphasis on the use of drugs.

A traumatogenic occlusion is also an important factor, and in itself, can be productive of such changes in the circulation as to cause bleeding of the gingival tissues on the slightest provocation. It is important to remember that any bleeding from the gingival tissues is significant of a break in the epithelial lining of the crevice, and so is of considerable significance in the matter of focal infection.

Systemic factors, while less frequent, may be responsible for bleeding in cases that would otherwise be baffling. Medical men have drawn our attention to the fact that certain forms of blood dyscrasias may cause bleeding of the gingival tissues. A history of the case and medical co-operation is required where sus-

picion of such a condition exists. Writing in the *Journal of the A.D.A.* in May 1936, Birch, M.D. of Chicago, says, "There is a large group of patients who visit the dentist because of bleeding gums. The patient believes he is one of the famous 'four out of five' who have pyorrhea. In many instances he is right, but in others he is wrong. Bleeding of the gums is a symptom in a long list of diseases, in which may be included agranulocytic angina (a form of anaemia) and the acute leukemias." Scurvy, according to the writer, is not uncommon today, and the lack of sufficient vitamin C may be found to be a factor. Occasionally one sees a case of mercurial stomatitis which is apt to be mistaken for Vincent's infection. A differential diagnosis can be made by a history of the

case and the use of the microscope if necessary.

In conclusion, since we have been considering early manifestations of periodontal disturbances, I would like to close with some words of Dr. Arthur Merritt. "In these days when much is being said about the high cost of dental service, and the failure of the dental profession to meet the public needs, the question of prevention takes on a new meaning. It should be remembered in this connection that there never was a case of periodontoclasia that reached an advanced stage that could not, at the beginning, have been cured at an infinitesimal cost. Prevention or early treatment is the only answer to the charge that dental service is expensive."

*Fixed or Removable Bridges—Which Does the Periodontist Prefer?**

by A. J. McDONAGH, L.D.S., Toronto, Ontario

CERTAINLY I favour fixed bridges, if the fixed bridges are properly made. But in order to have success with a fixed bridge, from a periodontist's standpoint, it must be made in such a way that there is no leverage on the abutments. It must not create a torque. In other words, the force transmitted from the bridge to the abutments must be in line with the long axis of the teeth, or else, the anchorage of the bridge must be capable of resisting the torque to such an extent that the force comes in line with the long axis of the teeth. For instance, if you have a right molar tooth anchored to a right cuspid, the anchorage continuing to the

left cuspid, that will take care of your leverage or torque. If you want to make your bridge partly removable and partly fixed, which is often advisable for sanitary reasons, your removable part can be clasped to your fixed part without putting a torque on the abutments. In other words, the whole idea is to get rid of traumagenic torque. Many comparatively short bridges will fail when a bridge, as just described, will succeed, because of torque caused by buccal or lingual cusps on the short bridge being too prominent or buccal or lingual cusps on the opposing teeth being too long or because the line of stress extending from one abut-

* A contribution to the symposium on periodontia presented at the Annual Winter Clinic of the Academy of Dentistry, Toronto, December, 1940.

ment to the other is not a straight line at right angles to the long axis of the teeth.

CLASPS OR OTHER RETAINERS—Which Should be used on a Loose Tooth?

I believe clasps should never be used on a loose tooth. But if you can make the socket of a loose tooth healthy, you can use a splint attached properly to make a loose tooth tight, and a healthy hygienic case, provided the teeth adjacent to the loose tooth will lend themselves to such a splint.

PREDISPOSITION TO PERIODONTAL DISEASE—What People Have It?

I would place the lack of proper food containing proper vitamins as the one outstanding factor. That is the greatest primary aetiological factor.

Next to that I would place traumagenic torque resulting from a number of causes, the principal being faulty occlusion, the result of improper anatomical shapes of the teeth and cusps and teeth which are not placed in an ideal relationship in the upper and lower jaw. In this connection you will have lack of function or of proper function. Faulty occlusion would also embrace non-occlusion, that is where some of the teeth do not occlude in the regular functions of the jaws. You may have under-function from this cause and you may have under-function from not closing the teeth firmly enough, particularly in the act of swallowing which occurs many times an hour. We must realize swallowing normally puts a pres-

sure of several pounds on every tooth in occlusion with the one in the opposite jaw, thereby giving the tissues of the periodontum healthy, almost continuous exercise. You will find that persons of low mentality often do not give their teeth and surrounding tissues this necessary stimulation.

Another factor which has to be taken into consideration is premature wear. This would occur from abrasive grit in food or chewing gum, particularly if one is in the habit of chewing more on one side than the other.

It also can be caused by the following:—

Chemical action.

Improper tooth-brushing. On the other hand, proper massaging by tooth brush is beneficial.

Abnormal biting habits.

Supragingival calculus.

Subgingival calculus.

Food impaction resulting from lack of or poor contact points. According to Sir Frank Collier this is one great cause which exists among English people.

Improperly shaped fillings, inlays, crowns and so forth, including orthodontic appliances.

Mouth-breathing.

Systemic; Debilitating diseases such as leukemia, diabetes and nephritis if connected with periodontoclasia may be the cause or effect.

Vitamin deficiencies are a very evident cause, particularly deficiencies of vitamins D and C.

It seems to me to be the part of a wise man to see to it that through life he is always beginning to learn some new subject. Did not Jowett begin to study physiology at seventy? Anyone whose friends have begun to take an interest in ornithology must have noticed the rejuvenating effect this has had on them. They begin to live with a new intensity. They become explorers on a quest, and dream of godwits in their sleep. The world is created afresh for them at sight of crossbills in a tree, and all the miseries of mankind are forgotten as they watch lime-white gannets battling with a storm and diving into wild waters. — "Y.Y." in the "New Statesman and Nation."

Trench Mouth—How Do You Recognize and Treat the Recurrent Condition?*

by CHARLES H. M. WILLIAMS, D.D.S., B.Sc. (Dent.), Toronto, Ontario

IT WILL be assumed that the recurrent attacks are of sub-acute degree. The diagnosis of this condition is dependent on the following evidence:

1. History of previous attacks of tenderness and bleeding of the gingivae.
2. Interproximal papillae appear blunt or cut-off mesio-distally and concave or cupped-out labio-lingually.
3. The inflammatory reaction in the gingivae is more marked than with chronic gingivitis.
4. Copious bleeding results if gingivae are touched at interproximal area.
5. Odour of the breath is often not characteristic of the acute condition.
6. Visible ulceration of the gingival margin is not usually noticeable.
7. A less intense form of the malaise which accompanies the acute phase often persists.

TREATMENT

Use of the strong caustic drugs, ordinarily used for the acute ulcerative phase, is not wise at this stage. Hygienic conditions which are favourable to continued healing must be established and maintained. Since this is a disease of the interproximal areas, which are inaccessible to the tooth-brush, the frequent use of an inter-proximal cleanser is one of the most important procedures in treating these cases. The interdental cleanser should be used after each meal and before retiring, for at least the first week of

treatment. Additional value is obtained in the early stages of treating most cases if the instrument is dipped in hydrogen peroxide just before it is inserted into each interproximal space. Topical application of 2% acriflavine or 2% acriviolet, two or three times daily, by the patient, may also be useful at this stage. At the end of a three or four day period the use of the hydrogen peroxide should be discontinued but employment of the interdental cleanser should be continued at least twice daily for several weeks.

Wax or other packing for the gingival crevices are useful in simplifying thorough sub-gingival scaling. Two or three packings at forty-eight hour intervals often produce striking effects.

Improvements in dietary habits or other forms of general systemic treatment are sometimes necessary to successful treatment.

Heavy smoking often impedes recovery.

Oxygen insufflation is often highly beneficial in stimulating recovery.

The elimination of all "incubation zones" is very important.

Two to four recall appointments at one or two month intervals are advisable until the interproximal gingival papillae have regained a normal or nearly normal form.

Intense application of the interdental cleanser and proper brushing technique must continue for months or years after office treatment is completed.

* A contribution to the symposium on periodontia presented at the Annual Winter Clinic of the Academy of Dentistry, Toronto, December, 1940.

Halitosis *

by M. A. ROSS THOMAS, D.D.S., Toronto, Ontario

IT HAS often been said, and by his very best patient, "My dentist is a very fine man and an excellent operator—but he has a very bad breath."

The fact that halitosis does not give the patient any pain or discomfort, and seldom makes him aware of its presence, is very unfortunate. It is one of the most offensive things that a human being can have and will cause him to lose more business and friends than anything else in the world. The type of advertising we have constantly before us in national magazines is true only in so far as it says that the unfortunate victim of halitosis will become a social outcast. The truth of the advertising stops there.

No one is free from tainted breath during some period of the day. Normal outgoing breath is said to be sterile "?" and free from odour. Some writers say the breath has the odour of chestnut bloom. It has also been said that a sweetish odour is sometimes given off, from the mucocutaneous junction of the nostrils, probably for sexual attraction. Bad odours are not a normal condition in or around healthy organs and when present should be fought vigorously.

In the famous Ebers Papyrus is found the first mention of halitosis and reference is made to the use of such aromatic substances as myrrh, juniper berries and mastic frankincense to overcome the breath odours.

Pliny the younger in his famous work on Natural History (23-79 A.D.) makes the pertinent statement "Man's breath becomes infected by the bad quality of

his food, bad state of teeth, and still more by his age."

Not much has been written in English on the subject of halitosis. About one hundred articles have appeared in the past thirty years. Howe wrote a book on the subject in 1847 and Pearlman in 1936 (Colgates). The ever present nose is a very true diagnostic guide for practical purposes and is mentioned as such in the writings of Hippocrates.

The Cryoscope is a scientific instrument devised to collect a quantity of condensed moisture from the human breath. A modification of this instrument passes the air from the pressure supply through concentrated sulphuric acid, then through alkaline permanganate of potash and finally through sterile warm water. This air is then circulated through the mouth and the condensed moisture tested for odour.

The Osmoscope (Fair and Wells—34) is a scientific apparatus designed to measure the intensity of odours in drinking water samples, dining-car odours, etc. The findings of this instrument are recorded in units established and referred to as *PO*. (*PO*₂ is, or slightly under, the average for human breath.) By placing some of the condensed moisture from the patient's breath in a test tube and using the osmoscope as a testing apparatus a definite rating of the intensity of the breath odour is obtained.

Ninety percent of fetid breath odours come from stagnation of food debris adhering to the teeth, in interproximal spaces, on the tongue, around artificial

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substitutes, in cavities, in more advanced stages of periodontal lesions and from tobacco, also the fermenting carbohydrates producing the highly odoriferous fatty acid compounds, oxobutyric, diacetic, lactic and propionic, etc.

Albumin and protein are broken down and give off the ill-smelling hydrogen sulphide and closely related penetrating mercaptans.

Gingivitis, stomatitis, Vincent's infection, dry socket, putrescent pulp, have very characteristic odours.

The coated surface of the tongue has a very bad odour and taste.

Stagnant mucous and saliva have bad odour and taste.

The nasopharyngeal region so susceptible to infection, with the maxillary sinuses so often chronically infected, makes it difficult to say where a bad odour is coming from.

An intense odour may come from the bronchii and lungs. These are often blood borne.

Febrile conditions, scarlet fever, measles, small pox, typhoid fever, diphtheria, cause a temporary inhibition of the flow of saliva with resultant bad breath.

Tobacco is rated as the second greatest offender and is easily recognized as such.

Bad odours do not come from the stomach as is often stated. There is sufficient evidence to prove that this is so in the fact that chopped onions swallowed in a capsule do not affect the breath, while a similar amount taken by mouth will taint the breath for many hours.

Chlorimine mouth wash has a direct

action in killing the after odour of garlic and onion.

An upset digestion and constipation may produce a bad breath due to the odours being absorbed by the blood and exhaled by the breath. It is interesting to note that oil of garlic taken by capsule will taint the breath almost as badly as when it is taken by mouth due to the fact that it is absorbed by the blood and borne to the lungs where it is exhaled.

The lapse of time between the meal and the time of test, sex and age are all factors to be taken into consideration.

The treatment for these conditions is largely in the field of the periodontist and consists in the removal of tartar deposits, polishing rough enamel, spot-grinding occlusions, pointing out bad habits of diet, posture, breathing, eating, correcting tooth-brushing technique, the insufflation of oxygen and systematic care.

An interesting experiment at Northwestern University, Chicago, showed that forty-seven per cent of all people have an offensive breath to other people.

A clinical test was made on 25 people:

Breath was uniformly foul after a night's sleep, average 2.9; high 5.0; low 2.0 PO. After brushing with flavourless dentifrice, average 1.0; high 2.0; low 0.0 PO.

Early morning brushing reduces odours 66%.

After brushing 90% of the cases will be inoffensive to others, for a period of time? How long?

Brushing with a dentifrice is more effective than brushing without a dentifrice.

Glen E. Sulser, T. A. Leany

L. S. Fosdick, Ph.D. '40

J. of D. Resh PI37.

"The secret of all discoverers is that they regard nothing as impossible."—Gustave le Bon, per Dental Record.

The Radiogram in Periodontal Examination —What Are the Main Values? *

by H. MURRAY ROBB, D.D.S., B.Sc. (Dent.), Toronto, Ontario

BEFORE naming any specific values I would say that the most obvious use is in permitting a general survey of the bone and tooth structures at a glance. In other words, it allows one to evaluate a mouth and draw up a general plan of procedure with a minimum of time and effort. But note that I said "general plan" and not particular or definite plan, and I will enlarge on this later.

Again, it shows at a glance conditions other than periodontal that have a bearing on the treatment or prognosis of the case. For example, if a tooth has an apical area or a cavity involving the pulp, this should be known before commencing periodontal treatment.

Now with regard to more specific conditions that are revealed, I would say that we probably look first to see whether there is bone resorption or destruction. Bear in mind, however, that the radiogram may be misleading. Pockets may be obscured by roots of teeth, particularly labial or lingual pockets, or by heavy buccal or lingual plates of bone. Again, a foreshortened radiogram will make resorption appear less or sometimes almost nil. For that reason I prefer to take a low angle picture of upper molars, although if I cut off a root I may have to retake it. A "safe" high angle distorts everything, may hide important conditions and is exceedingly misleading, while a lower angle will be more or less accurate as far as it shows the roots.

However, it is advisable to have a

radiographic picture of the bone in spite of its limitations as we are often quite surprised to find general or localized resorption of the bone, even to what some call "diffuse alveolar atrophy" in cases where the outward appearance of the gum is normal or nearly so. It may be relatively pink and firm and in tight contact with the roots to the point of making it difficult or impossible to insert a probe. I say impossible because bone salts can be withdrawn from the matrix without separation of the periodontal fibres from the root and pocket formation.

Another very important value of the radiogram is in revealing early signs of periodontitis complex. This disease begins with degenerative changes in the periodontal membrane which result in destruction of alveolar bone and hence a thickening of the membrane. This stage is called periodontitis fibrosa. It is important to recognize this early if possible because deep and narrow pockets can develop comparatively quickly after the membrane has undergone a change in character and in thickness. There is, of course, increased mobility at this stage which can be detected clinically. In fact there are few periodontal conditions that can not be detected or deduced on clinical examination but sometimes our powers of observation or deduction may be somewhat lacking.

An early sign of periodontitis simplex is rarefaction of the alveolar crests. This shows readily in the radiogram and is a

* A contribution to the symposium on periodontia presented at the Annual Winter Clinic of the Academy of Dentistry, Toronto, December, 1940.

warning that steps should be taken to prevent progression, yet I am afraid that this warning is often unheeded. At this stage there are generally noticeable gingival signs, although these may be somewhat obscured by vigorous or thorough brushing habits.

The radiogram also shows the number, size, direction and anatomical form of the roots. The value of this may be partially illustrated as follows: a 3 mm pocket on a large single rooted tooth may have a quite favourable prognosis, while on a small tapered root it might have a very unfavourable prognosis, or if the bifurcation were close to the gingival line it might be almost or actually involved.

Remember that the radiographic picture must be correlated with the clinical one. The appearance of a radiogram after treatment is in general the same as before treatment. The soft tissue is usually not distinguishable and although the bone may have receded, there may be no pockets. Conversely, teeth in a radiogram may look good and clinically the gingiva may be in a deplorable condition.

This is a brief treatment of a big subject but I have tried to point out that for a better and more complete understanding of any mouth being studied a good radiogram is invaluable.

Third Molars—When Should They Be Extracted?*

by H. MURRAY ROBB, D.D.S., Toronto, Ontario

THE extraction of third molars constitutes a problem which frequently confronts all dentists and we are often in doubt as to what course to advise. The following principles may help to serve as a guide when attempting to make a decision.

Let us deal first with partially or completely erupted lower teeth. If the radiogram shows a dark area or definitely thickened dental follicle at the distal of the crown it must be considered infected and should be removed.

If the gum is overlying the occlusal surface or is so high at the buccal or distal that the crown of the tooth is partly covered and can not be completely cleansed and if there is no possibility of the tooth erupting further or the gum

receding to its normal level, then this tooth is at least a potential source of trouble and should be removed before infection becomes established. I would say that partly covered third molars constitute the most frequent cause of trouble with which the exodontist has to deal. Sooner or later they invariably become infected and often flare up with little or no warning. Even if the first acute attack is mild it will be repeated, and each time it is usually more severe. In my experience the summer months produce more of these cases than all the rest of the year and the intensity is usually greater at this time. They have been responsible for spoiling many an otherwise good holiday.

Erupted upper third molars which are

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situated or are inclined buccally, so that there is insufficient space between the tooth and the ramus for proper cleansing should in most cases be extracted. These usually exhibit chronic marginal gingivitis or caries or decalcification on the buccal side. They are also frequently not in occlusion with a lower tooth and tend to exfoliate.

Either an upper or a lower which has no antagonist and has extruded should be removed, as this leads to food impaction, caries and pocket formation.

Unerupted wisdom teeth at any age from about 14 upwards which are definitely impacted, or by virtue of insufficient jaw development will never erupt into normal occlusion and free from overlying gum tissue, should be given serious attention. While we all hesitate to condemn them without apparent reason, yet I believe that the possibility of them causing trouble at some future time is so great that we are only evading our responsibility by passing them up without a thought.

Among the conditions which have been known to result from impacted teeth are the following:

1. Infection, leading to local inflammation, trismus, swollen glands or even quinsy, or leading to systemic or focal infection in other parts of the body.

2. Pain in the head or jaws by reflex nerve disturbance.

3. Functional disturbances caused by reflex nerve action, as gastric or female conditions. This was pointed out by Dr. Main at the Convention this year.

4. Ear trouble, as partial deafness or noises in the ear.

5. Overlapping of the lower, or sometimes upper, incisors. This is very common and results in malocclusion and frequently in chronic hypertrophic gingivitis.

6. Injury to the 2nd molar. There may be actual resorption of the root of this tooth at the point of contact, or merely

a lack of bone for considerable distance along the distal side. This bone rarely, if ever, fills in completely after the extraction of the wisdom tooth, the result being a pocket or recession of the gum at the distal of the 2nd molar. These areas are difficult to keep clean and healthy. The teeth may become sensitive or even develop a pulpitis. For this reason we often recommend early removal at an age when the powers of regeneration are more active. If the person reaches middle age and there are no urgent symptoms we occasionally recommend leaving the third molar because we know that the condition of the 2nd molar would necessitate its removal also.

It is rarely that a person will go through life with an impacted tooth without one or other of these conditions arising and often considerable trouble or discomfort will be experienced before the wisdom tooth is removed. Often the teeth are never suspected as being the cause of the condition. Also it must be remembered that the older the patient the more dense the bone and the slower the healing. It becomes a much more serious operation if the patient is over 40.

Of particular interest in periodontia is the relation between partially erupted 3rd molars and trench mouth or Vincent's infection.

I believe it has been estimated that 90% of trench mouth cases may be traced to 3rd molars, except of course in cases like the army, where it is spread by contagion.

These gum flaps will harbour Vincent's organisms for years, permitting periodic flare-ups. I saw veterans of the last war who had annual attacks for 10 years until the wisdom teeth were finally removed.

Treatment of the acute symptoms alone will never give a permanent cure until these primary foci are eliminated. The extraction, of course, must not be done

during an active stage or serious complications may result.

One last condition which often harbours infection is the case where the 3rd molar is impacted and covered with a thick pad of gum. Normally this gum should be attached to the distal of the

2nd molar but often one is able to pass a probe down this surface until the 3rd molar is felt. This crevice may appear harmless but it affords a lodging for bacteria just as a periodontal pocket does. Owing to the thickness of the tissue this can only be eliminated by extraction.

Occlusion on Partial Dentures—How Can It Be Controlled?*

by CHARLES H. M. WILLIAMS, D.D.S., B.Sc. (Dent.), Toronto, Ontario.

IN PARTIALLY edentulous arches, the remaining teeth must have the best possible occlusal relations to allow them a favourable prognosis.

Comfort in using the partial dentures is also largely dependent on co-ordination of the functioning planes of the natural and artificial teeth.

If "artificial wearing" or grinding is indicated for occlusal correction it should be performed on the natural teeth before the artificial restoration is made. The partial denture should then be constructed so that the occlusal surfaces of the artificial teeth will co-ordinate in function with the natural teeth. When the partial dentures have "settled" several days after insertion, final occlusal correction by grinding or by use of abrasive gum is indicated.

A desirable occlusal state may be maintained by the following means:

1. Maximum saddle area for the partial denture consistent with comfort and aesthetics.

2. Ample occlusal rest support. The use of multiple occlusal rests is highly desirable. It is frequently unwise to

greatly increase the occlusal load on a tooth which is unfortunate enough to be next to an edentulous area. Accessory occlusal rests on teeth which are not immediately adjoining edentulous areas are good and the use of continuous occlusal rests is often excellent procedure. Splinting of two or more teeth adjoining an edentulous area by use of interlocked or soldered gold inlays will frequently allow them to be used as a combined support for the occlusal rest of the artificial appliance.

3. Rebasement of the artificial denture for the maintenance of good occlusal relations is very important and the patient should be aware of the importance of this service.

4. Periodic use of an abrasive gum is useful for the finer degrees of occlusal correction.

The significance of a co-ordinated function on the natural and artificial teeth should be so well implanted in the mind of the patient that there will be a demand for the use of the technical procedures just described.

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Why Not Banker-Dentist Co-operation?

by T. L. MARSH, D.D.S., Toronto, Ontario

IT SEEMS to me that the dental health of this country could be greatly improved if people learned to budget their dental expenses and felt that they could afford to have dental treatment at the time when it is needed, instead of postponing treatment, sometimes indefinitely.

It is by acquainting their patients with a sound and proved method of budgeting these expenses that dentists can enable greater use to be made of the facilities now offered by the chartered banks. By extending these facilities at moderate rates of interest and with every reasonable consideration for the borrower, the banks can enable dentists to obtain prompt payment for their services rendered.

The idea of co-operation between the professions and the banks is not entirely new, although it has not reached in Canada the development attained in the United States. About a year ago, a Pay-Your-Doctor-Week, sponsored by one local bank in each community was ob-

served in many American cities from coast to coast. The sponsoring bank made "personal" or "character loans" to persons with good credit standing, backed usually by two co-makers of the note, who were themselves people of some substance and with a stake in the community. These loans were used to clean up accumulated medical bills or to provide for medical treatment required at the time. The doctors were supplied by the local bank with all the necessary information as to the terms, rates and method of payment of the loan, and in short acted as brokers between banks and their patients. Tact was of course necessary in approaching a patient, but it was found that the patient was able to appreciate that not only the doctor, by being paid, was able in turn to meet his obligations, but that he, the patient, by discharging his debt promptly, had greater peace of mind.

The position of the dentist differs not at all from that of the doctor when it is

Fig. 1.

Approximate rates and repayment terms for personal loans

Amount of loan	Interest in advance at six per cent	Service charge and stamp tax	Net proceeds	Twelve monthly deposits
\$ 60	\$ 3.60	\$.53	\$ 55.87	\$ 5
108	6.48	.56	100.96	9
168	10.08	.56	157.36	14
216	12.96	.81	202.23	18
300	18.00	1.06	280.94	25
1,068	64.08	3.06	1,000.86	89

Life insurance placed by the Bank protects the borrower's estate

The requirements for a personal loan are—

That the applicant is at least 21 years of age; is regularly employed; has sufficient income from his employment or some other source to make the required monthly deposits; can satisfy the Bank that his credit standing is good. Endorsers are usually required but loans are made to people on their own names when the means of the borrower warrant credit without other security.

Fig. 2.

a question of being paid by his patients. Surely what is advantageous for the one would be also for the other.

Canadian chartered banks have these facilities for making loans to people requiring medical, dental or hospital care. One banking institution organized some years ago a separate department, staffed by specially trained officers, to handle personal loan business. In about four years' time this bank made personal loans totaling \$36,000,000, of which 12 per cent,

or \$4,360,000 were accorded for the purpose of paying dental, medical and hospital expenses. Fig. 1, Fig. 2.

If any of my colleagues are interested in pursuing the subject further, they have only to consult their local bank manager who will, I am sure, furnish all the required information and will do his best to facilitate, in the shortest time possible, the completion of the transaction.

2 College Street.

To the child, time seems to go very slowly. His birthday, his Christmas, his holiday are laggard in coming; he would like to cut out the dilatory days that intervene. The grown man, unless he is still childishly impetuous and impatient, escapes from that faulty fore-shortening. Strong swimmer in the stream of life, he so rejoices in the exercise of his capacities and powers that he feels no call to keep an eye upon the landmarks past which he moves.

It is left, paradoxically enough, to the ageing man, just when physically and mentally the pace is slowing for him, to become aware that "time driveth onward fast." He hears more clearly every day the roar of the fall over which the current of his mortal life must plunge to unfathomed depths. If that were all, it would be a dreadful sound. But instinct, reason, and faith combine to hear in it overtones which tell of a course changed indeed, but still continuing.—The Times.

It is the nature of a profession to develop and grow—to take in more and more territory—until it has reached the point where no man can cover it efficiently in its entirety. Such has been the story with law, with engineering, with medicine, and such is the current story with dentistry. The man who undertakes to perform all operations incidental to a dental practice—from removing an impacted third molar to constructing the newest type of prosthetic appliance—is apt these days to be looked at with dubiety, rather than with admiration.—Arthur J. Gallagher, per Apollonian.

Practice Management

"Getting Along With The Boss"

by TOMYE TURNER, Toronto, Ontario

THE duties of a dental nurse or assistant are many and diversified. Most important of all is that you maintain a steady keel during your voyage as the captain of your ship, "The Manager". The manager implies one who skilfully but cautiously conducts the affairs of the office. You are the captain of your ship, but not the "Boss". You must possess to the nth degree, the quality of tolerance.

It has been said that the most lovable quality that any human being can possess is tolerance. Tolerance is the vision that enables us to see things from another's viewpoint. It is the generosity that concedes to others the right to their own opinions and peculiarities. It is the bigness that enables one to let people be happy in their own way, instead of in our way. Intolerance has no place in the dental office.

There may be days when your boss is upset and worried, unresponsive to his patients, and curt with you. During that time, put aside any business matters that you had intended to discuss with him. Never ask, "What's wrong?" In fact, such questions from the assistant are always taboo. You are there to assist, not to hinder with personal curiosities. Try to be twice as careful to do everything correctly. Help in every way to make his work easier for him, and when the Doctor's good humour returns, he may not say it, but he will be grateful for your quiet understanding and assistance.

Above all, never nag your "Boss" about little details. If he has over-looked something you had suggested he do, (note: it is always "suggest" — never "ask"), wait a couple of days, then diplomatically inquire if he was successful in doing this particular thing, and nine times out of ten, it will be done the next day.

The assistant must acquire a second mind when starting to work—the dentist's mind with its reactions — for she must continually put herself in the Doctor's place by saying, "Would I want my assistant to say that?" The deliberate cultivation of the gift of putting yourself in the other person's place is the beginning of tactfulness. In this way, you can actually look at yourself and avoid doing the things that might cause friction.

Tact implies a delicate and sympathetic perception. It emphasizes skill and adroitness in meeting the requirements of a situation. It is a sensitive mental knowledge, a discernment of what is appropriate to do or say in dealing with others, without giving offense. Tact is letting people know what you mean without saying it.

Never discuss your personal affairs with the Doctor. That is your private business and belongs to your life outside the office.

You should always manage to look tidy and neat, whether you feel it or not. While in the office, it is well not to admit any illness nor to betray your personal feelings, for good health is essential when

the nervous tension and strain is above the average. On the other hand, when your "Boss" is indisposed and complains, you must be a patient listener. See that he takes the remedy indicated and be sympathetic. It will help.

Carry a little book around in your uniform pocket. Take immediate note of the Doctor's requests and of needed supplies. Your employer will appreciate never having to ask you to perform the same duty twice. He will be irritated if he reaches for something only to find that it is not there. Never be forced to say, "I forgot to order that article". Take a personal pride in keeping your supplies well-stocked and you'll find the task easier, for everyone hates to get a mark against their pride.

One unfailing rule is: **DO IT NOW**. For example; a patient unexpectedly dropped into this particular dental office with a broken central facing on a permanent anterior bridge. The dentist set the broken pieces together to tide the patient over until the next appointment, as time did not permit the grinding and fitting of a new facing. The assistant, true to this rule, ordered a facing within ten minutes. After a week the patient returned. The assistant looked at the day sheet and thought, "Oh, Mrs. John Smith, that will be a denture impression", and immediately prepared the impression materials. She had completely forgotten about the Mrs. John Smith who needed a new facing. Both patients had the same name. Imagine her relief when the dentist asked, "Have you the facing, Miss Brown?" and she could reply quickly, "Yes, I have, Doctor." If the assistant had not ordered the facing immediately, she would have experienced the humiliation of admitting to the dentist and to the patient that she had forgotten. Notations made in your pocket notebook may, in a moment of leisure, be transferred to your desk calendar, and this brings

to mind another good rule: **NEVER TRUST YOUR MEMORY**.

Arrange the Doctor's personal telephone calls so that they can be made while the operating room is being prepared for the next patient. A patient should never be kept waiting in the chair while the Doctor talks on the telephone. If however, the call is important and the delay cannot be avoided, then the assistant must be a good conversationalist and so distract the patient's mind from the minutes that are flying, especially if the dentist works on a time basis. Yet, when he returns to the operating room, the assistant has no need to converse further, for that is the dentist's kingdom and he must rule it alone.

Manage the time spent in the office. Every minute is valuable. If the Doctor is beginning a denture case, it is wise to arrange all necessary appointments in advance. Carry out the same routine for bridge work and extensive dentistry. This saves time when the patient is dismissed. If the patient will need only one more appointment, arrange for it a few days hence and write it on an appointment card. As he is leaving, ask, "Is this time convenient?" and the physiological effect of seeing a definite time in writing will make up his mind for him much quicker, than if you were to ask, "When would you like your next appointment, Mr. Jones?" This method saves the many precious minutes that would be lost while the patient recites to you all the reasons why he just can't make it on that day or the next. If possible, make appointments while the patient is still in the operating room. As it becomes routine, you will find many opportunities to do this while the Doctor is away from the chair. Needless to say, appointments should not be discussed when the Doctor is busy at the chair, because he will resent any interruptions that might distract the patient's attention or his. If, however,

you have been unable to make a satisfactory appointment before the patient leaves the operating room, tactfully say, "I'll arrange an appointment for you, Mr. Jones, while you are putting on your things." This will give you an opportunity to straighten the operating room and seat the next patient without wasting the Doctor's operating time.

At no time should you criticize the dentist. Be deferential and courteous in your manner toward him. One example of the assistant's courtesy to the Doctor is in the introduction of new patients. For instance, "Dr. Brown, this is Mr. Jones". In this way, it puts both the Doctor and the patient at ease and helps to start conversation.

In your treatment of the dentist and the patient, you should always convey the following thoughts in some tactful manner: When the dentist accepts a case, he places his personal and professional integrity at stake. He will not render an inferior or inadequate service to anyone. There is no difference in the quality or completeness of service rendered to any patient. The Doctor cannot accept responsibility for any patient unless all professional decisions are placed in his hands. No service is ever rendered without careful study and due regard for the patient's general welfare. When you can create such an atmosphere in your office, you have reached a peak of efficiency.

Though you may be blamed for something that is not your fault, never alibi. Say nothing and the matter will be forgotten that much sooner. Never take time to make excuses. If you are an efficient assistant there will be no neces-

sity for excuses. But if you make a mistake, admit it and apologize. It will "clear the air". Gladstone said, "I am more afraid of deserving criticism than receiving it".

Your dentist will probably do many things with which you do not agree. But again, silence is the best way to insure congeniality, for he is paying you to assist him in running his office smoothly and not to find fault. This means that as an assistant you are expected to be a gracious hostess and to give intelligent and wholehearted co-operation to the dentist and his patients at all times. You should see that appointments are kept promptly; that supplies are ready and available; that the office is clean and neat; that the books are accurate and up-to-date; that bills are paid when due; and that all collections are tactfully made. You must do your share of the laboratory work; aid in the developing and mounting of x-ray films; assist at the chair as required; and anticipate the Doctor's needs by having the necessary instruments and filling materials ready when they are needed.

In addition to these duties, both physical and mental, you must manage to look cheerful, be cheerful, and to cheerfully manage your "Boss" without his knowing it, and the latter is the most difficult task of all. In fact, it is an art acquired only through years of patient understanding and association. It is a task for which you will never receive sufficient credit, but one that will prove to be the most gratifying, because it will mean, "Getting along with the Boss".—*Bul. Ont. D Nurses' and Assistants' Association.*

If we want peace in the world we must ourselves be men and women of peace, and that will mean for all of us setting a watch over our lips and refraining from the easy but unprofitable habit of saying the unkind and the ungenerous, the critical and the only half-true thing about the people from whom we personally differ.—Dr. Lunt, Bishop of Ripon.

Timely Tips for Dental Nurses and Assistants

(Courtesy of Lucile Church, Hamilton Chapter, from Bulletin Ontario Dental Nurses' and Assistants' Association.)

- (1) Plan your work, then plan the day.
- (2) Increase your efficiency by constant self-improvement.
- (3) Deport yourself with dignity in keeping with professional standards.
- (4) The security of your position depends upon an adequate speech personality so strive to increase your vocabulary.
- (5) The most valuable result of all education is the ability to make yourself do the thing you have to do when it ought to be done whether you like it or not.
- (6) The telephone is a door to your office. The manner in which you open that door makes a vast difference.
- (7) Be careful to look as well in your uniform as you do in your street clothes.
- (8) By the appearance of the office, by your habits and by your conversation, let your patients know how much importance you attach to cleanliness.
- (9) Your dental office is your daytime home, make it so attractive that you will enjoy working in it.
- (10) The basis of tact is the effort to please some one else.
- (11) No trials—no triumphs.
- (12) Look upon success as a journey rather than a destiny.

Comments of a Successful Dentist

"Remarks and Comments" of a successful man: "I try not to oversell people and feel that good dentistry can be done for people of ordinary means. However, people of means should be made to want the best. After all, they have the best homes, automobiles, clothes and vacations. More money should be spent for dentistry and it is up to each individual dentist to start a campaign of teaching both in his office and when he is out socially. I would like to eliminate from

the practice of dentistry all men who are *willing* to make less than \$5,000.00 per year. They are responsible for low fees and the lack of education on the part of the public. When a dentist wants to make an economic success, he usually does something and works harder with his patients to attain that success. He is usually a better dentist and does more for dentistry."—*Quotation from a paper by Dr. William C. Stillson of Cleveland, Ohio, in Jour. of Ohio State D. Soc.*

Speaking as an employer, I would say that the young man's prospect in business will be good or bad according to his degree of self-confidence. Educated brains can be bought or hired in almost any business. Muscle is a glut on the market. Craftsmanship, alas, is often without a market, but real courage is scarce and with personality is the most richly rewarded quality in business life.—Sir Harold Bellman in a recent speech.

Down Hitler With Dollars — Buy War Savings Certificates.

The Forum

•CHILDREN'S DENTISTRY

by CHARLES A. SWEET, D.D.S.,
Oakland, California.

(Presented at the Minnesota State Dental Association
Convention in St. Paul. Condensed from *North-West
Dentistry*.)

First Contact.—Frequently we receive a telephone call or personal visit from the mother of the child patient, explaining in detail that her child is different, so she tells us just how our treatments should be instituted. We must lend a sympathetic ear to this detailed description and show a decided interest in order to create a favourable impression on the parent. We must always be sympathetic with parents for they believe sincerely that a great obstacle is about to confront their child, an obstacle which will affect the child's entire future life in a dental office and perhaps his entire future well-being.

How frequently does this first interview end with the statement from the parent, "Mary is such a frail, nervous child, I do not suppose very much of anything can be done for her; at home we cannot reprimand her too severely but must reason everything out with her."

Now is our chance to establish the parent's confidence as to our ability to render a professional service. The mother is assured that in five, ten, or twenty years of caring for children, we have yet to find the child for whom we cannot do everything that needs to be done without difficulty. The parent is assured that many similar cases have been treated with complete success and that the most nervous or misbehaved children become our very best patients.

The well trained office assistant not only makes the appointment, but also adds to whatever has been said during the interview by assuring the parent that

she has yet to see the child who has not come through this new experience with flying colours. Her parting remark should be, "You need not worry in the least about your daughter. If you will just allow Dr. Blank and me to take care of her, everything will come out all right. Your child will enjoy coming to see us, and we shall be looking forward to seeing her next Wednesday at 10:30." The appointment, of course, is made for a week-day morning, with the explanation that the child will be fresh, i.e., not tired out from a day at school, and most co-operative; also, the dentist will have just a little more time to devote to his patient than during the busy after-school rush hours, and during the crowded Saturday schedule.

The parent's own mental sufferings, which are transmitted to the child, have been dispersed into thin air and in their place have been sown the seeds of confidence that her child will be well cared for by people who know how to care for her. This feeling will have been transmitted to the child and everyone within hearing distance by word of mouth and general attitude.

The first step in our alleviation of pain has been accomplished.

Second Contact.—At the time of our first interview, the parent has usually been impressed by the way the situation was handled. If it was a telephone call she has a desire to look things over, so she arrives a little early. A reception room with a few objects of interest to children, perhaps goldfish, books, and magazines suitable for children will make the patient feel at home and at ease. A genuine welcome by the office assistant

and calling the child by name, with the remark that Dr. Blank will be ready in just a few minutes, have an influence in the successful care of children.

The child and parent are invited into the operating room, which should give an impression of serious consideration of the problem to be dealt with and not one of frivolity and play. The dentist should welcome the child by calling him by his first name and quietly and affably asking him to seat himself in the operating chair. An examination is made of the child's mouth, the dentist explaining to the parent as nearly as possible the conditions present and the treatment to be instituted. Here is a golden opportunity to inform the parent that the work to be done will be lasting and of great benefit to the child's health and appearance. The decision has been made as to the amount of work, the fee, the payment and the most satisfactory time for appointments. As long as there is co-operation on the part of the mother and the child, the mother may remain in the operating room, but if there is any discord, it is better to have her leave the child in charge of the dentist and his assistant. If it is necessary to have the mother leave the operating room, the child is told that the work must be done regardless of what his desires may be and if he does not co-operate, it will be necessary for the assistant to hold his hand, with the result that the work may be unpleasant, but that if he will help, it is possible that no great unpleasantness will be experienced, and that every precaution will be taken to make it as agreeable as possible for him. This talk with the child should be given in a slow, clear, understanding manner with every indication that the work will proceed regardless of the child's personal desires and he therefore must make the best of the situation.

In many instances, it will be necessary for the assistant to hold the hands in

place beside the child, while the dentist proceeds in a firm, determined manner. Usually, this will be the end of all physical resistance. Particularly is this true of younger children. We should not try to fool the child, as he can read us like an open book. No bribes nor rewards should be offered for good behaviour, but a word of praise is always appreciated.

If the child cries, no attention is paid to his crying. The dentist proceeds with the work to be done, as the mouth is open, which proves of assistance to the operator. Crying is the natural defense of all children. In due time it will stop if the desired results are not achieved. In extreme cases it may be advisable to use the towel method to obtain quiet and co-operation, but this should be used only on the obstreperous, not on the nervous child. It is ineffective to go to the extreme of being too pleasant, as it may lead to promises that will later be broken and build up an everlasting distrust.

Always keep your temper for no one else will want it. Firmness, friendliness, truthfulness and sympathy are helpers in the alleviation of pain.

THERAPEUTIC AGENTS

We have at our command numerous therapeutic agents which will be of value to us in the relief of mental and physical pain. They should be administered without hesitation.

Sedatives.—The nervous or highly excitable child very frequently should have prescribed for him some sedative before his first few visits to the dentist or at least until an understanding has been reached.

Some one of the following sedatives taken by mouth will be found very useful. The dosage varies according to the weight of the child. The drug is given forty-five minutes before the appointment.

Amytal— $1\frac{1}{2}$ to 2 grains ($\frac{1}{2}$ tablet)

Sodium amytal— $1\frac{1}{2}$ to 2 grains ($\frac{1}{2}$ capsule)

Luminal sodium— $\frac{1}{2}$ grain

Pentobarbital— $\frac{3}{4}$ grain

Codeine— $\frac{1}{4}$ grain

If the parent can be depended on to follow explicit instructions, the sedative may be administered at home; otherwise, it is best to have the child come to the office sufficiently early for the sedative to be given there; i.e., fully forty-five minutes before the dental work begins. All sedatives have the maximum effect in the second forty-five minute period following their administration. This will allow ample time for all necessary work at one sitting, before the effect of the sedative begins to wear off. In most instances, the only agent needed will be the sedative.

Analgesics.—Analgesics may be used, but as a general rule are of little value in the practice of children's dentistry.

Local Anaesthetics.—There should be no hesitancy in the use of local anaesthetics regardless of the age of the child. It is never necessary to inject more than 2 c.c. of procaine with 1:50,000 epinephrine in order to produce anaesthesia for all operative procedures. Children are quite accustomed to the hypodermic needle because of its frequent use by the physician.

A topical anaesthetic should be applied to the area for one minute before the injection is made, to lessen the sensation from the insertion of the needle.

Complete anaesthesia will be obtained in all upper deciduous teeth from an infiltration injection, but a tuberosity injection must be used for the upper first permanent molars.

The mandibular injection proves most successful for the lower teeth, but a periodontal or interosseous injection may be used in some cases. The dentist should never be satisfied with partial anaesthesia. The frequent use of local anaesthetics,

particularly with older children, helps to establish a happy relationship with their dentist and becomes an accepted part of their dental care. There is every reason to use this therapeutic agent to alleviate pain.

EQUIPMENT

Sharp cutting instruments, new burs and vibrationless handpieces are absolutely essential to minimize pain and decrease the amount of time necessary to complete an operation.

Warm air and a pleasant tasting mouth spray add to the pleasure of a visit to the dentist for persons of all ages. All instruments should be within easy reach of the operator at all times.

The operating chair should be tipped slightly backwards so that it is comfortable for the child and, at the same time, gives the operator better visibility in the mouth.

OPERATIVE SKILL

The skill of the operator adds greatly to the possibility of reducing actual pain. This skill is not an inherited quality of a few, but comes from a thorough knowledge of the anatomy and morphology of the teeth. Applying this knowledge to the perfection of cavity preparation, in the minimum amount of time possible to produce a lasting filling, is most essential.

With adequate knowledge and proper development of one's skill in operative dentistry for children, self-confidence is developed to a high degree. This in turn is transmitted to the child. The knowledge, skill and confidence of the dentist lessens the child's apprehension and is another step in the alleviation of pain.

TREATMENT OF DECIDUOUS TEETH WITH EXPOSED PULPS

A deciduous tooth with an exposed pulp in the upper jaw can be anaesthetized by infiltration, but in the lower jaw a

mandibular block or interosseous injection is necessary.

As soon as the anaesthetic has taken effect the tooth is kept free from saliva by isolating it with cotton rolls and sterilizing it with alcohol.

The operative procedures are as follows:

1. The No. 702 tapered fissure bur is placed in the contra-angle handpiece. The pulp chamber is opened so that every part of it is clearly exposed.

2. This is followed by a No. 5 round bur, removing the entire bulbous portion of the pulp, leaving the pulp fibres in the canal or canals.

3. The pulp chamber is wiped clean and the haemorrhage is controlled by using pellets of cotton. A treatment of formo-cresol or beechwood creosote is sealed in, with temporary stopping for from two to three days.

4. At the next appointment the tooth is isolated with cotton rolls, washed with alcohol, and the temporary stopping and dressing removed.

5. Any stain or blood exudate in the pulp chamber or on the walls of the cavity are removed by applying hydrogen peroxide and scraping with spoon excavators.

6. A second dressing of formo-cresol or beechwood creosote is sealed in, with temporary stopping for from two to three days.

7. At the next or last appointment, the tooth is again isolated with cotton rolls and washed with alcohol, and the temporary stopping and dressing are removed.

8. The pulp chamber of the tooth is filled with a creamy mix of zinc oxide and eugenol, and with pellets of cotton the paste is forced into the orifices of canals and on to the floor of the pulp chamber. The excess of zinc oxide and eugenol paste is scraped out with spoon excavators.

9. A thick mix of crown and bridge

cement is placed in the cavity and a sufficiently deep step is carved before the cement has set.

10. The restoration of the tooth should now be completed by placing a silver amalgam filling in the cavity.

CAVITY PREPARATION FOR DECIDUOUS TEETH

Sharp cutting instruments, new burs and handpieces that are in perfect condition are absolutely essential to lessen the time in preparing a cavity as well as to minimize pain. All instruments should be within easy reach and as much as possible accomplished with each instrument before a change is made.

FILLING MATERIALS

It has been customary and is still good practice to line a cavity of any appreciable depth to protect the pulp from shock. Besides crown and bridge cement and zinc oxide and eugenol, there are many different preparations that are being used successfully and answer the purpose for which they were intended.

The following technique is recommended for foundation teeth only and will prove as satisfactory as any other cavity lining and greatly minimize the time necessary to complete the operation.

Isolating with cotton rolls and drying the foundation tooth in which the cavity has been prepared, the entire cavity is thoroughly moistened with 95 per cent phenol. The phenol is allowed to remain in the cavity during the time the matrix is being adjusted and the filling material prepared. When the filling is ready to be inserted, the excess phenol is wiped out and the cavity is again dried with a blast of warm air.

Ninety-five per cent phenol is recommended because it has the following properties:

1. It coagulates albumin.
2. It sterilizes to a high degree.

3. It is analgesic.
4. It is a desensitizer.
5. It has no effect on filling materials.
6. It does not discolour tooth structure.

Matrices and Filling Material.—The instrumentarium necessary for proper filling includes the following: (1) Matrix, (2) small sized amalgam plugger, (3) ball burnisher, (4) plastic instrument, (5) carving instrument or instruments, (6) tooth pick.

A well formed, tight fitting matrix is essential for all compound cavities with the exception of Class IV cavity preparation. My preference is for the type of matrix which entirely surrounds the tooth and can be securely tightened to conform to the gingival margin of the tooth. Proper contour and contact, with no overhanging filling material is essential to the maintenance of a healthy mouth. After the matrix has been placed on the tooth, insert at the gingival margin a thin wedge carved from an ordinary toothpick.

(1) *Silver Amalgam.*—With proper cavity preparation, desensitization, and utilization of a close fitting matrix, silver amalgam is an ideal filling material for foundation teeth. With proper contour, contact, and highly polished surfaces, silver amalgam will stand the stress of mastication and last as long as a deciduous tooth is normally retained in the mouth. Silver amalgam has good appearance when properly finished and meets the average person's economic situation.

(2) *Gold Inlays.*—Gold inlays will prove as successful a filling material in foundation teeth as can be used, but they increase the cost to such an extent that the average person does not feel this fine type of dentistry is justified. In certain cases where a great extent of tooth structure has been lost but the tooth is vital, or if the bite is to be opened, gold inlays should be recommended and used. When conditions are present that make it necessary or possible to take advantage of the

gold inlay with very slight modification of cavity preparation, gold inlays should be recommended.

(3) *Copper Amalgam.*—Copper amalgam may be used, if one develops a proper technique with as much success as silver amalgam, but it will take approximately twice as much time. Some copper amalgams can be contoured and when polished to a smooth surface, will maintain a normal relationship.

(4) *Cements.*—Cements, oxy-phosphate or silicious, are contra-indicated for filling materials in foundation teeth and should be used only when intended for temporary purposes.

Placement and Finishing of Fillings.—A small amount of alloy without expressing any mercury is puddled on to the gingival floor of the cavity gradually adding alloy that has been freed from excess of mercury until the cavity is over-filled. Smooth off the excess filling with the ball burnisher. Remove the wooden wedge at the gingival margin, holding the matrix firmly in place.

Next place the ball burnisher on top of the proximal portion of the filling, loosen the matrix holder, slowly removing it from the tooth; burnish a contact to the adjoining tooth and proceed to remove excess filling material and carve the restoration with the carving and plastic instruments.

At a subsequent sitting the filling is polished using polishing burs, disks, sand and cuttlefish, pumice and chalk on fast revolving brushes.

•THE UNERUPTED THIRD MOLAR FROM AN ORTHODONTIC POINT OF VIEW

by JAMES W. FORD, D.D.S., Chicago, Ill.
(Conclusions of paper in the *Journal of the A.D.A.*, Dec., 1940.)

IMPACTED third molars are often responsible for disturbance of occlusion.

Impaction of third molars occurring after the first twenty-eight teeth have

erupted in normal occlusion may cause malocclusion in cases which have not undergone orthodontic treatment.

Periodic roentgenographic examinations at intervals of one year after about 16 years of age are advisable, to determine whether growth is normal. The tipped position of the third molar in its early development does not indicate impaction.

Extraction of third molars is not advisable until the adult growth pattern has been attained. In delayed dentition, considerable additional time may be necessary for a decision.

Extraction of third molars without partially formed roots is inadvisable, for surgical and developmental reasons.

The orthodontic case cannot be dismissed as completed until the third molars are erupted into normal position or extracted.

The skilled orthodontist does not need to consider compromise treatment, such as extracting the second molars to favour the erupting third molars. In competent hands, third molar operations are no longer as hazardous as they have been in the past and are advisable where indicated.

• FROM THE DENTIST'S OWN BOOK

by C. EDMUND KELLS, D.D.S.

UPON a recent visit to a large city, I met a man at a clinic who insisted upon my visiting his office. I went, and there I saw everything that went for a high class office—that is, everything that he had bought looked good. The sterilizing unit was a stunner!

When I entered, he was seated (long

white gown and all) at a desk writing. He met me and shook hands with me. He showed me all around the office. Then a patient was announced, and she was seated in the chair and he introduced her to me.

He then explained the case; removed upper and lower dentures and laid them upon an aseptic (sic) bracket table. Then placed two or three fingers of each hand in her mouth and held the cheeks back. Then he completed his dissertation upon the case, picked up the plates and replaced them in her mouth, and then discharged her.

In a few minutes I was ready to go, whereupon he showed me to the elevator and proffered his hand, which I managed not to take. I wonder if his feelings would have been hurt if I had suggested that all his fine equipment, sterilizer staring one in the face, etc., should be backed up by a little soap and water for his hands occasionally? He had not washed his hands once during all my visit!—*Dentistry a Digest of Practice.*

• THE CARE OF TEETH DURING PREGNANCY

by FREDERICK J. LYNCH, M.D., Boston, Mass.
(Conclusions of paper in *The Apollonian*, April, 1940)

1. Prophylaxis by means of tooth brush massage to increase the tone of the tissues, adequate diet and the administration of calcium, phosphorus and vitamins.

2. Any work, which can be postponed until pregnancy is completed without jeopardizing the teeth, should be deferred.

3. Any operative procedure which cannot be delayed until the completion of the pregnancy without damage to the teeth should be performed.

Charm is nothing but vitality and the quality of not thinking eternally about oneself.—Edward Thompson.

Save Our Way to Victory — Buy War Savings Certificates.

Individualism Plus

Dentists of Canada — in all countries to-day we find individual effort supplemented by government effort.

In all countries including the democracies there is a tendency to increase, from time to time, government influence. Increased government influence means increased government control. How can this tendency be kept within bounds in our own profession? Only by your own leadership. Only by your support of a strengthened national dental body, the only organization in Canada which can deal effectively with the Dominion Government in national dental matters.

Or Else

If it can be shown that dentistry is failing to fulfil its mission, then the government will act no matter how far it is necessary to go.

Nowadays, government is an "or else" government. It says "you do it, or else we will do it."

Consequently, we submit the fact that an adequately supported Canadian Dental Association can provide the needed "plus" to the individual effort of the members of the profession and can also remove the necessity of any government saying "or else" to Canadian dentistry.

If you have not already expressed, to your provincial legal body, your opinion regarding the need for a strengthened national dental body, kindly do so immediately. Your interests, as well as those of your profession, may be at stake.

—Issued by Committee on National Dental Progress.



PRINCE EDWARD ISLAND



Editor—M. H. GARVIN, Winnipeg

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What's Wrong With Business?

Too many dentists are saying, "What's wrong with business?" and some who are not saying it now may be saying it later on unless methods of practice are changed.

In the February issue of the Journal there were many suggestions for the building up of one's practice; such as, the right use of words; the value of placing the emphasis on things of first importance; the development of one's personality; one's actions in front of the patient; the study of psychology; the emphasis which should be placed by the dentist on the appearance of the patient's teeth; the use of positive methods in dealing with patients; the attitude and conduct and efficiency of the assistant and many other suggestions worthy of careful attention.

There is one special point, however, mentioned in Mr. Wheeler's fine paper which the writer would like to emphasize. Wheeler says: "I know a dentist who never lets me see the instruments. Another one I used to go to had them all spread out and jangled them in front of me until I got the daylight's scared out of me the way he banged them around—it finally drove me to another office, because what he did was terrible. What he said was



By TED F. LEIGH, M.D.
New York City

fine but it takes the combination of both to impress, because we are influenced through the eye as well as through the ear."

Those dentists who, when extracting for a patient, make use of a surgical operating table and who place a towel over the patient's eyes to exclude the light, that is from the patient's standpoint, but really to exclude the sight of what is going on, from the dentist's standpoint, are working under ideal conditions. Few are able to afford this luxury but very much can be done with the ordinary dental chair, if some care is used, to obtain the same effect.

How frequently have we held a hypodermic needle, a couple of inches long, in front of the patient's eyes with the same effect as shown so clearly in the accompanying photograph of the terrified negro boy, a procedure which is so unnecessary. How often do we hold an instrument, or an instrument upon the end of which is some gutta percha, in a bunsen flame right in front of the patient, then pass this hot instrument towards the patient's mouth as he cringes from fear. No such burner should ever be placed directly in front of the patient so that such procedures can be seen. Forceps should

never be held in front of the patient. All other instruments should be kept out of sight just as carefully as possible.

In treating periodontal lesions why should a lancet or an instrument covered with blood ever be allowed to hang over the edge of a bracket table right in front of a sensitive patient? To avoid this the writer would suggest always using an oblong dish filled with water coloured with Westminster green, a dish of such size that the end of the handles only will appear over the edge. An antiseptic can be used in this solution if desired, but the mere fact that one prevents débris from hardening on the instrument points is an advantage when it comes to washing and sterilizing. The greatest value is that the patient is protected from the unpleasant spectacle which would otherwise be directly within his vision.

The writer knows of an assistant who, while drying off a forceps, was told by the dentist to bring the next patient into the operating room. With forceps still in hand, she proceeded to the reception room and waving the arm which held the forceps towards the unsuspecting victim said, "You're next." The writer also knows a patient who left a dentist because he always picked up the instruments by their points instead of by their handles.

It is unfortunate that so many of these apparently innocent procedures become habits in our everyday life; little things in the minds of most of us, admittedly, but looming large in the minds of many a sensitive patient and playing havoc with one's practice as far as these particular people are concerned. Until these habits are corrected we will continue to say, "What's wrong with business?"

BOOK REVIEWS

Dental Formulary, by Hermann Prinz, A.M., D.D.S., M.D., Sc. F., Dr. med. dent. Emeritus Professor of Materia Medica and Therapeutics; The Thomas W. Evans Museum and Dental Institute School of Dentistry, University of Pennsylvania, Philadelphia, Pa. Sixth edition, thoroughly revised. Published 1941 by The Macmillans in Canada, St. Martin's House, Toronto. Price, \$3.85.

This is a practical guide for the preparation of chemical and technical compounds and accessories with an index to oral diseases and their treatment.

Less important preparations have been discarded and most of the formulas included, especially those of a technical nature, represent the practical experience of men of mature judgment who are known as experts in their respective fields.

The object of this book is to furnish to the practitioner and the student a reliable guide for technical information as needed in the office and laboratory of a busy practice.

The following subjects are discussed: Plaster of Paris, Separating Media, Investment Compounds, Moulding Materials, Gutta-Percha, Dental Rubbers, Waxes, Plastic Impression Compounds, Cements, Adhesives, Varnishes, Alloys, Solders, Amalgams, Refining, Tempering, Metal Polishers, Electroplating, Coloring, Lacquering and Etching of Metals, Preparations for the Mouth and Teeth, Pharmaceutical Compound, Index to Oral Diseases, Immediate Treatment of Acute Poisoning, Saliva and Urine Analysis, Diagnostic Hints and Tables.

With Dr. Prinz' outstanding reputation in this field this book should find its way into most dental offices.—M.H.G.

The Merck Manual of Therapeutics and Materia Medica, Seventh Edition, 1940.

Published by Merck and Co., Canadian Address, 560 De Courcelles Street, Montreal. Price, \$2.50.

From an original 250 pages in 1899, The Merck Manual has grown to 1462 pages in the current edition and has been completely rewritten, rearranged and modernized. Each of the 256 chapters was approved by a specialist in his respective field, many of whom being professors in the leading American medical colleges. The therapy was outlined by the late Dr. Bernard Fantus, Professor of Therapeutics, University of Illinois College of Medicine.

Among the new features of this seventh edition is the comprehensive cross reference index which will be of valuable aid to the busy practitioner for quick reference.

The Merck Manual is intended for physicians, dentists, pharmacists, chemists, nurses and those in allied professions and the price is established on a non-profit basis.

This book should prove invaluable to the dentist who wishes to secure a more thorough knowledge of the aetiology, diagnosis and treatment of the many diseases which the physician is called upon to treat, many of which have a direct bearing upon the practice of dentistry.—*M.H.G.*

CORRESPONDENCE

War Savings Certificates

To the Editor, Journal of the C.D.A.:

A lengthy or detailed appeal to the dentists of Canada on behalf of War Savings Certificates does not appear to be necessary in view of the effective and sustained publicity given by the Government to this vital undertaking, and the many further impacts on all of us through various voluntary endeavours.

Yet it may not be amiss to remind ourselves through the pages of our Journal that we have a very positive duty and privilege to

participate to the full extent of our individual ability.

Also, those who are the custodians of the funds of various dental societies across Canada would do well to see if their societies can not do their bit in furthering the common cause by placing any of their available resources in War Savings Certificates.

February 27, 1941.

Signed, WM. W. WOODBURY,
President,
Canadian Dental Association.

DENTAL CORPS NEWS

News from Headquarters

The Dental Nurses Alumni Association held a bridge in Toronto on Feb. 18, the purpose of this being to raise funds for the Mobile Field Unit. The sum of \$104.00 was realized and a cheque was forwarded to the C.D.C. Reg'l Fund.

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Rapid progress is being reported in the construction of dental clinic buildings in the Air Training Commands, R.C.A.F. A number of these stations are opening well ahead of schedule and arrangements are being made in every case to have dental service available on the date the schools open.

•

Authority has been received which materially increases the H.W.E. C.D.C. The rapid in-

crease of R.C.A.F. personnel is so far ahead of schedule that more dental detachments are required before the end of the fiscal year.

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A cheque for \$40.00 was received from the Ontario Dental Nurses' and Assistants' Association. This is for the Regimental Fund of the Unit, and has been acknowledged with thanks.

•

The Director left Ottawa on Feb. 15, enroute to Western Canada as far as the Pacific Coast, on inspectional duty. Lt. H. McPherson (Q.M.) accompanied him. Lt.-Col. Cameron will be A/Director during the absence of Col. Lott.

•

Arrangements have been made with a representative of the Belgian Government in con-

nection with having dental service rendered by the C.D.C. to the Belgians in training at a centre in Canada.

The first trainees from Australia in Winnipeg to report for dental service did so this month.

A cheque was received from the Ontario Dental Association as a donation to the Regimental Fund of this Unit. Donations such as this for Mobile Dental Clinic purposes are much appreciated.

Authorization has been received for the University of Toronto to conduct a course for dental technicians. This course is expected to be attended by about sixty candidates and will last for six months. Each Dental Company in Canada is being asked to send its quota of candidates for this course. The candidates are required to have matriculation standing for the study of dentistry.
February, 1941.

**M.D. No. 1, Headquarters London,
Ontario
Ladies' Auxiliary**

Twenty-three Christmas boxes were sent to officers and men overseas by the Ladies' Auxiliary of M.D. No. 1, and letters were received from all of them expressing appreciation for the gifts, which made the members feel the work is really worth while. Cigarettes are still being sent every three months.

On February 11 a very successful tea was held at the home of Dr. and Mrs. S. M. Kennedy and a rummage sale is planned for the near future.

**M.D. No. 10, Headquarters Winnipeg,
Manitoba**

Col. Lott Visits Winnipeg

The Director of Dental Services, Colonel F. M. Lott, paid an inspection visit to M.D. No. 10 on February 18, 19 and 20. He was accompanied by Lieut. MacPherson of the accounting department, C.D.C. Headquarters. During his visit twenty officers of No. 10 and No. 18 Companies had a mess dinner at which Col. Lott discussed C.D.C. problems.

Ladies' Auxiliary

On February 19 the C.D.C. Ladies' Auxiliary held a silver tea at the home of Dr. and Mrs. C. P. Banning. A large number attended including Col. Lott and several C.D.C. officers. Over One Hundred Dollars were received, in addition to thirty-five memberships.

Toronto Ladies Auxiliary

The Toronto East District of the Ladies Auxilliary had a very successful party at the home of Mrs. J. S. Lapp on March 15th. After serving a buffet supper to the many guests, games of great variety provided entertainment. It was a millionaire's night and proceeds amounting to \$93 has helped greatly to bolster up the treasury which is being depleted continually by the group's war auxiliary activities. The Toronto East group is convened by Mrs. H. R. Skilling. Mrs. S. J. Hopkins was convener of the supper committee and with her Mrs. J. B. Stewart, Mrs. J. H. Peters, Mrs. H. W. Hoag, Mrs. E. T. Guest, Mrs. Lloyd Grose with Mrs. J. S. Lapp who gave her home and was hostess.

NEWS FROM THE PROVINCES

MANITOBA:

Winnipeg Dental Society

The Winnipeg Dental Society has had two fine meetings in quick succession recently. One at the end of February and the other on March 11. The February meeting was unusual in that it was a joint meeting to which the Winnipeg Medical Society had been invited to listen to an address from Dr. H. R. Butt of the Mayo Clinic, on the subject of Vitamins, those elusive and mysterious substances with-

out which we soon are as dust and upon which the public of the United States in 1938 spent \$54,000,000.00. It was probably twice as much in 1940 because the human race has much satisfaction in swallowing pills and expecting a quick cure. The substance of Dr. Butt's opinions is that while vitamins are necessary they are much less costly if bought in the grocery store but that the public look with suspicion upon the doctor who advises a patient to take plenty of green vegetables,

milk, meat, eggs, fruits, etc., in place of some vile tasting medicine.

The March meeting was to hear a talk by Col. Frank Lott, the Director of Dental Service of the C.A.A.F. It was a revelation to all present to hear the amount of detail associated with the organization of the Dental Corps from nothing up to its present high standard of efficiency. We have nothing but admiration and gratitude for the selection of Col. Lott to take on the stupendous task which he has so completely mastered.

Dr. B. L. Toombs, President of the Society, presided at both meetings.

ONTARIO:

Toronto Academy Officers

The newly elected slate of officers for the Academy of Dentistry, Toronto, are announced as follows—

President—Dr. S. A. MacGregor.

Past President—Dr. E. T. Guest.

Pres. Elect—Dr. Lloyd M. Grose.

Secretary—Dr. Charles McLean.

Treasurer—Dr. Chas. H. M. Williams.

Chairman, Public Dental Health Committee
—Dr. Earl Bancroft.

Councillors—Dr. Fred Flora, Dr. W. Walton-Ball, Dr. W. Prendergast, Dr. Gordon Johnston and Dr. Gordon Chalmers.

Further Support Recommended for C.D.A.

The Hamilton Dental Society, at their meeting on March 12th, passed a resolution to the effect that its members favoured further support to the Canadian Dental Association by the Board of the Royal College of Dental Surgeons of Ontario.

The Academy of Dentistry, Toronto, passed the following resolution on motion of Drs. Bothwell and Amy without a dissenting vote: "That the Board of the Royal College of Dental Surgeons be asked to increase the annual licentiate fee sufficiently to enable them to give adequate financial support to the Canadian Dental Association."

Attending Meeting at St. Louis

Dean Arnold Mason and Dr. L. F. Kreuger of the Faculty of Dentistry, University of

Toronto, attended the Convention of the American Association of Dental Schools on March 17, 18 and 19. Dr. Gordon Agnew of Chengtu, China, on furlough to Canada and pursuing post graduate studies in Toronto, presented a paper, "Dental Caries in Primitive Peoples," before the International Association of Dental Research, which group met at the same time.

Ottawa Dental Society

Dr. Frank Martin, of Toronto, was the guest speaker at the meeting of the Ottawa Dental Society held in the Chateau Laurier, February 17. His subject, "Fixed Partial Dentures" was illustrated by motion pictures and slides.

Lt.-Col. George L. Cameron, D.S.O., deputy director of dental services, Canadian Dental Corps, was among a number of visiting members of that unit. The guests were introduced by Captain C. Allan.

London Dental Society

The February meeting of the London Dental Society was held in the New Public Library on the 22nd, with the President, Dr. D. A. Campbell, presiding. This meeting, announced as "Local Night," was of unusual interest as those responsible for the various clinics and papers were members chosen from our Society.

The program for the evening was as follows:—

Dr. J. F. Giffen—"Partial Dentures"

Dr. W. Y. Hayden—"Conservatism in Periodontal Treatment"

Dr. H. G. Marshall—"Economical Furnace for Staining"

Dr. F. F. Baker—"Root Canal Therapy"

Dr. Sykes, Dr. Galbraith and Dr. Roula-
ston—"Plastics"

Major Ferguson and Lieut. Hall—"Demonstration of New Plastic Impression Material"

The Study Group of the London Dental Society under the able chairmanship of Dr. F. F. Baker has this year carried through to completion a very successful series of meetings. The group has met twice a month during the winter season. Practical subjects relating to many phases of our work were selected for study. For all meetings excellent material had been gathered and prepared for

presentation and discussion. The course of study follows:—

Pre and Post Extraction Care

Leader—Dr. Fred Kennedy

Group—Drs. (Maj.) Ferguson, (Capt.)

Windrim

Acrylics (2 Meetings)

Leader —Dr. R. Sykes

Group—Drs. Squires, Galbraith, Barnes, Taylor, Roulaston

Vitamins and Oral Health

Leader—Dr. W. Y. Hayden

Group—Drs. (Lt.-Col.) S. A. Moore, Walden, A. G. Davidson

Caries (2 Meetings)

Leader—Dr. H. Marshall

Group—Drs. McCutcheon, Gillies, Campbell.

Toronto Dental Nurses' Alumnae

The regular monthly meeting of the Dental Nurses' Alumnae was held on March 11 at the Women's Union, St. George St., Toronto.

The patch-work quilts made for the Red Cross by several members of the Alumnae during the year were on display and a collection was taken for the purchase of more quilt material.

It was decided that the Alumnae annual dinner in honour of the graduating class be held this year on the evening of graduation instead of at Convention time as in previous years.

—*Helen McKinley, Corresponding Secretary.*

Dental Nurses' and Assistants' Association

NIAGARA DISTRICT CHAPTER—The dental nurses and assistants of Niagara District met on February 3 at the home of Miss Grace Thomas, Niagara Falls, with seven members present. During the business session ideas were considered for raising money for the War Fund. It was decided to hold a Bridge or Tea for this purpose.

The President, Miss Mary French, prepared a list of drugs used in a dental office and led a discussion on their origin and use. Miss French also read an article on how dental service is rendered in the German prison camps, which was very interesting but very brutal. It made us feel that we are not so badly hurt after all. *Gertrude Doyle, Secretary-treasurer.*

ESSEX-KENT CHAPTER—The regular monthly meeting was held on February 3 in the Canada

Building, Windsor, with the President, Miss Dorothy Scott, in the chair. There was a report from the War Fund Convener and the President reminded the members of the Posters and Clinics to be prepared for the coming Convention in May. Following the business session, Dr. Walker gave a very interesting and instructive talk on "The Care of the Feet." *Winnifred E. Grier, Secretary.*

THUNDER BAY CHAPTER—The regular monthly meeting was held at the home of Miss Margaret Goodrick, Fort William, on February 5, with six members present. The newly-elected President, Miss Pat. Wheatley, conducted the business session.

It was decided to send a cheque for \$2.00 to the War Fund. After a lengthy discussion, it was decided not to send a delegate to the Ontario Convention, until our Chapter is re-organized. At the next meeting each member is to answer the Roll Call with a "Dental Assistant Resolution."

Following the business of the evening, the paper "Timely tips," by Miss Helena Logan, Toronto, was discussed and enjoyed by those present. A social hour followed and it was gratifying to see the members knitting for the troops overseas. *Ruth Garland, Secretary.*

SUDBURY DISTRICT CHAPTER—The March meeting was held in the Capitol Building, Sudbury, with the President, Miss Dorothy Fowler, in the chair. The Chapter regrets greatly the fact that it is losing a member, as Miss Mary Jones is leaving the city to be married. It was decided to meet on March 20 to plan Posters for the Convention in May.

The speaker of the evening was Dr. M. V. J. Keenan, who led a discussion on "The Development of Modern Dentistry." Miss Ada Gilliland thanked the speaker on behalf of the members. The meeting adjourned for refreshments in charge of the social committee. *Bernice Boyd, Secretary.*

TORONTO CHAPTER—The March meeting was held in the Royal York Hotel with the President, Miss Irean Checkley, in the chair. The meeting opened with the National Anthem and reports were given regarding the War activities of the Chapter; also the "Mile of Nickels" was initiated by Miss Gertrude

Wiggins. Several members brought in their strips filled up.

Posters and Clinics for the Convention in May were planned. The speaker of the evening, Dr. Kenneth Roberts, of the Roberts' Biological Laboratory, was introduced by Miss Tomye Turner. His subject, "Diagnostic Experimental Procedures" was most interesting.

Kathleen Simpson, Secretary.

Toronto Study Club of Dental Technicians

When The Toronto Study Club of Dental Technicians held their February meeting, they were addressed by Dr. John H. Duff, of The Faculty of Dentistry. The subject dealt with by the speaker was "Dr. Jaffe's Technique on full dentures". All members found Dr. Duff's address most interesting, and he was invited to speak again at some future date.

QUEBEC:

Mount Royal Dental Society

A general meeting of the Mount Royal Dental Society was held in the Mount Royal Hotel on February 21, at which the guest clinician for the day was Dr. J. Coupland, of Ottawa, Canada.

During the afternoon session, the clinician gave a practical demonstration of taking a full mouth x-ray series, by a standardized technique. Dr. Coupland pointed out that the position of the head and body, the placement and holding of the film packet were important facts to observe in taking good pictures. How to obtain a clear view of upper molar roots and of irregular teeth were among some of the refined points demonstrated. The tendency to gag while x-raying upper posteriors was successfully overcome by biting on the thumb holding the film packet in the mouth.

The evening session commenced after dinner, and Dr. Coupland showed many slides which emphasized the importance of repeated radiographs for definite diagnosis.

Dr. Coupland's clinic was thoroughly enjoyed, as he pointed out ways to overcome the common errors which made the difference between good and poor films.

At a general meeting of the Mount Royal Dental Society, the guest clinician was Dr. Chas. Ogur, F.I.C.A., of Brooklyn, New York, who gave an afternoon and evening clinic on Root Canal Therapy.

The afternoon session commenced with a lecture in which Dr. Ogur mentioned the numerous precautions necessary to observe in doing proper and thorough root therapy. The clinician then explained, in detail, his complete technique of treatment. Numerous slides were shown demonstrating that large radiolucent areas at root apices could be eliminated by conservative treatment.

The main feature of the evening session was a forty-five minute colored motion picture reel illustrating, in detail, a root canal operation as it was performed in the mouth. The entire film was beautifully taken and each step in treatment was amply demonstrated to allow a perfect understanding of the technique. Dr. Ogur merited the warm applause which followed the end of the film.

During dinner Dr. Samuel Bass, of New York City, was unanimously elected an honorary member of the Mount Royal Dental Society for his generous altruistic service rendered to the Society. An appropriate engraving of the occasion was forwarded to Dr. Bass.

Dr. Blacklock Honoured

Dr. J. N. Blacklock has been elected the President of the Royal Montreal Curling Club. This Club has the distinction of not only being the oldest curling club in Canada, but the oldest sporting institute on the North American Continent. It was founded in 1807. J. N. is a Past President of the Montreal Dental Club, a golfer, yachtsman, hunter and at bridge, look out. His enthusiasm is a source of constant delight to his friends and we are very proud to have him as a confrère.

George Cameron, D.D.S., D.D.S., Montreal.

NOVA SCOTIA:

Halifax Dental Society

At the February meeting of the Halifax Dental Society Dr. A. W. Faulkner presided in the absence of Dr. W. C. Oxner. Dr. R.

L. Saunders, assistant anatomist at Dalhousie University, spoke on "Surgery of the Bone and its Regeneration."—*Halifax Mail*.

BRITISH COLUMBIA:

Vancouver Dental Society

One of the most interesting and inspiring meetings ever held by the Vancouver Dental Society was the last monthly meeting held in the Vancouver Hotel. The guest speaker of the evening Dr. G. L. Stibbs graciously moved that his paper be postponed to a future date so that the members could hear Canada's able and capable Director of Dental Services and Officer Adminstrating the Canadian Dental Corps, Colonel Frank M. Lott.

Colonel Lott was on an inspection tour of District No. 11, and came over from Victoria with Major E. Fraser Allen, District Officer and Major Dick McDougal to be present at the meeting. Several other officers were also present.

Colonel Lott gave a full report and history of the organization and development of the Canadian Dental Corps, describing the many pitfalls that had been surmounted. Every member was thrilled by the very capable manner in which this Corps has been brought to its present state of efficiency. The Canadian Dental Association is to be congratulated upon its recommendation to the Minister of Militia that Frank Lott be appointed director of Dental Services. His military and dental training, as well as his research ability made him without doubt the most acceptable dentist for the position. The organization and accomplishments of the Corps have far outdistanced our wildest dreams.

Colonel Lott to most of the dentists of British Columbia is still—Frank—just one of the boys and we believe it is through this fellowship that he receives the full support of his officers and men. His modest presentation of the work that had been accomplished thrilled us, and his officers present together with members of the dental society glowed with pride in our Commanding Officer.—J. S. B.

SASKATCHEWAN:

Regina Dental Society

Colonel F. M. Lott, Director of Dental Services, addressed the Regina Dental Society on February 21 on the subject of the Dental Corps.

The address, preceded by a dinner in the Saskatchewan Hotel, was largely attended, several dentists from outside points being present. Dr. H. J. Kennedy, President of the Society, presided, and with him at the head table, besides Colonel F. M. Lott, were Lieut. Commdr. A. C. Ellison, R.C.N.V.R.; Wing Commdr P. R. Hampton, R.C.A.F.; Major A. G. Smith, D.D.O., No 12 Company, and Major N. S. Bailey, C.D.O., No. 20 Company. Some eighteen dental officers from No. 12 and 20 Companies were in attendance, most of whom are stationed in Regina. Seven of these came from outside points; Saskatoon, Dundurn Camp, Mossbank and Moose Jaw.

Dr. Roy Johnson, in moving a vote of thanks, said that the Regina Dental Society was particularly fortunate in having such a splendid speaker, and that the rapt attention of those present was a clear indication that the address was very much appreciated.

After the general meeting the dental officers met with Colonel F. M. Lott. Here questions pertaining to the Corps were taken up and discussed, and it was felt that this visit of Colonel Lott's would be of lasting benefit to the Dental Corps service in this district.

A. G. Smith, Major, D.D.O., M.D. No. 12.

Dental Nurses and Assistants

The Wm. Waters' Dental Laboratory entertained the Regina dental nurses and assistants following their usual supper meeting, March 3. Very interesting clinics demonstrating new dental laboratory techniques were given by Mr. Jim Tackman, Ernie Asals and Clarence Phipps. Present, also, to assist in looking after the guests were Mrs. Fowle and Mr. Wm. Waters.

Miss Mary Brett made the regular draw for the raffle, Mrs. O. Blake winning the prize.—R. M.

It looks queer, and a little pathetic, to see a youth without some flair for mechanical work undertaking dentistry as a career.—Arthur J. Gallagher, per Apollonian.

EMPIRE NEWS

AUSTRALIA:

Christmas Cards and Seals



In order to augment the funds of the Auxiliary Army Dental Service the Dental Nurses Auxiliary sponsored the issue of a Christmas card and a seal which were offered for sale to the members of the Branch (New South Wales). A picture of the seal is presented herewith.—*D. Jrl. of Aust.*

GREAT BRITAIN:

Guy's Hospital

(Condensed from *Guy's Hospital Gazette*,
Jan. 25, 1941.)

On December 30, 1940, the various population of the Hospital were scattered about in the different buildings. Outside, there seemed to be an excessive commotion. A few of us wandered along towards the scene of activity more to escape from our present surroundings than out of curiosity.

Hardly had we set foot outside when a shower of incendiary bombs rained down upon the whole district; the sudden transformation of our feelings need not be described. Snatching at sandbags, running with buckets of water, nurses, students and medical staff alike fought those glowing bombs, without thought of personal risk, yet full well knowing that such bombs in the past had frequently been of an explosive nature. While our efforts were for the most part successful, in the surrounding district neighboring buildings were unattended. It is with mixed feelings that one watches a small fire less than a foot square gradually spread

over the whole roof, ultimately to involve the entire premises. It was not long before Guy's was ringed by fire on all sides; those buildings which were not actually directly hit, caught fire within an hour or two, either by direct spread from an adjacent building or from burning cinders which filled the sky and rained down everywhere.

In some places in the Hospital electrical switches were melted by the heat and once contact was made electric lights began to shine in many curious places which were not blacked out. Although these had about as much effect as shining a torch at noon on a bright sunny day, so automatic had we become in the matter of regulations that it seemed that the emergency of the moment was to extinguish these lights, which many of us did, using all kinds of missiles from buckets to bricks.

Very early in the evening, we had the misfortune to be hit by two high-explosive bombs. The first scoring a direct hit on the surgical block, the second involving the bakery and neighboring buildings. Parts of Evelyn and Naaman Wards no longer exist but owing to the type of construction and the foundation, the effects of the explosion were fairly limited. Dorcas Ward, which was filled with patients and nurses, was very badly shaken and with the electricity cut off, the atmosphere filled with dust and glass and the crash of falling masonry only a few feet away, it is easy to understand the slight confusion which resulted at first. However, when the "fire and fury" had cleared, there was really very little damage to the ward itself; before many minutes had passed the students appeared on the scene and using their own commonsense, not waiting for orders, began their arduous task of transporting the patients to safety. Fortunately, just such an emergency had been anticipated by the Hospital authorities; Addison and Victoria Wards were standing by fully equipped, with a full complement of nurses, with beds made up and warmed ready to receive these patients and even overflows of casualties from elsewhere.

Martha Ward, although not directly hit, suffered from the effects of blast which

travelled along the underground passages, sweeping away heavy partitions under the nurses' home and massage building like matchwood. One ramification of this blast ended up under Martha Ward and blew up the floor and one outside wall; by a fortunate coincidence a piano happened to be standing directly over the underground passageway and its weight tended to neutralize the force of the blast. Even so, the piano was hurled into the air, landing several feet away upside down. Guy's seems to be a house of miracles, for again no one was hurt and the patients were evacuated without mishap.

By the time all these proceedings had been carried out, Guy's was surrounded by a blaze of fire which seriously rivalled Dante's blazing inferno. Guy's was virtually cut off from the outside world by fire. It became necessary to evacuate all the patients as soon as possible, a task which was carried out with commendable smoothness, again with thanks to the tireless energy of the students. It was due to them that Hunt's House, in fact Guy's Hospital, still stands, a veritable miracle in a district of burning ruins. That they should have saved their Country so much and at the same time, in a few cases, suffered loss of personal property, seems unfair.

How they arrived is difficult to understand, but next morning when the doors were opened at 8:30, the Out-Patient's Hall was filled with patients; all of them were examined, diagnosed and treated, if necessary they were admitted to Hospital. In less than three hours from the time we had sought out a mattress in some underground corner to rest our aching limbs we had returned to business as usual.

Wholemeal Bread

Lord Balfour of Burleigh, chairman of the Medical Research Council, said in the House of Lords recently that the Council had given the question of bread close attention since the early days of the war, and recommended an extraction of not less than 80 to 85 per cent as well as the addition of calcium salt. The addition of calcium to brown bread allowed better bone and tooth formation by increasing calcium retention in the body; for it was a defect of bread, especially when

made from a higher extraction flour, that it prevented the utilization of calcium by the body. Calcium deficiency had long been a defect of nutrition among our people, and was evident, he said, in the widespread defective formation of teeth. Lord Woolton had expressed himself as loth to insist on the public having no choice, but to eat wholemeal bread, but replied that it was quite clear that the more high-extraction flour was used the less would be the demand on shipping space for wheat, and that it might become a part of national policy to press hard for the consumption of this form of bread from that point of view.—*Br. D. Journal.*

SOUTH AFRICA:

Experiences of a Dentist "Somewhere in Africa"

Capt. L. W. Blazey writes saying he has not had time to write to all his friends, so here are extracts from a letter lately received at Port Elizabeth, from somewhere up North:

"I am quite settled down for work here. I start off as soon after six as possible, after shaving and washing, and carry on until dusk, which is just after six. I go to my tent and sit in the dark in my birthday suit until I am cool and more or less dry; then I get into my canvas bath and splash about until seven, when we are allowed to put on lights. The Italians are fond of raiding in the late of the evening, but they are too scared of night landings to stay out very late. The trip up was very interesting. In a swamp we saw two elephants, one of which was a big bull—quite different to the Addo ones. We saw a lot of sand grouse, partridge and guinea fowl also Grants gazelle and dick-dick (very small bucks). A new one on me was a buck with a long swan neck, like a young giraffe, only its tailpiece was higher than its shoulders. I think it is called a gouranek. We saw dozens of whart hogs, a kind of long-legged wild pig, that ran away at the sight of us, with a long thin, straight tail with a tuft at the end, waving erect in the air.

"We were on our way back when my lad at the back of the truck banged on the window and pointed out three Italian bombers,

so we had to screen our truck behind a tree. I watched them through my binoculars and saw them dropping bombs near the camp we had left. When they cleared off it was nearly dark and we had to drive along a track through the bush without lights for eleven miles. They had dropped bombs where we had hoped to get some guinea fowl. Next morning we got up at five to see the damage, and found a dozen or more of bombs which had failed to explode. I believe our fighters brought down one on its way home and badly damaged a second. Most of the bombs fell near a village that had been deserted for months!

"It is Sunday and we are having a half day.

Driving a few miles along the road we had a look at an ancient fort. On one of the interior walls some one has painted a large full-rigged sailing ship, with no sails set, and several figures of soldiers etc., in ancient days. We only stuck in the sand once. We camouflaged our tent in a novel way. Our boys got some ration flour which had been condemned, mixed it with water and sand. This they slung in ragged patches all over our lovely white tent. A few yards away it looks as if there is no tent there but just a few patches of sunlight shining through the thorn trees on to the sand below."—*S African Dental Jour.*

GENERAL NEWS

Midwinter Meeting of Chicago Dental Society

The following summary shows the distribution of the 12,215 visitors to the above meeting:—

Dentists	6,084
Chicago Dental Society Members	2,643
A.D.A. Members Outside of Chicago	3,441
Guests	4,078
Physicians	119
Public Health Nurses	112
Dental Students	537
Family	1,556
Dental Assistants	1,239
Dental Hygienists	118
Lay Guests	397
Laboratory Technicians and Operators	422
Exhibitors' Representatives	1,631
Total Attendance	12,215

One of the largest factors in the upturn in this year's registration figures was the enlarged program of Limited Attendance Clinics which featured nationally known instructors from every part of the country.—*Fortnightly Review of the Chi. D. Soc.*

U.S. Dentists Protest Selective Service Act

Dentists can now be inducted into the U.S. Army under the Selective Service Act as privates, without the opportunity to practice the profession in which they are trained and licensed.

This is the result of the complete suspension of all appointments to the Dental Reserve Corps and, at the present time, at least fifty dentists are, or will be, inducted into the army as privates. The Chicago Dental Society has wired its emphatic protest to Washington in the hope of having this arbitrary ruling set aside.

The present quota of the Dental Reserve Corps is 5,100 which, apparently, has been filled.—*Fortnightly Review of the Chi. D. Soc.*

"Getting Ready to Tackle Life"

A pamphlet is distributed by the American Association of Orthodontists of 292 Madison Avenue, New York, entitled "Getting Ready to Tackle Life." It contains a short story about Bill, a schoolboy who was slipping in the game of life and missing football signals with the eventual result that he was put off the team.

It adequately shows how facial and dental arch deformities as well as other impediments affect a growing boy psychologically as well as physically.

Bill was dragged down into a deep rut of despair and mental hazard until his parents were directed to an orthodontist and had his condition corrected.

The paper tells exactly what orthodontic treatment can do and winds up with Bill's



comeback and the glorious day when he becomes captain of the team. It certainly makes interesting, instructive and easy to read material for the reception room table.

The cover is faced with that interesting cover picture not so long ago published by Life Magazine. You may remember the young football player ready to tackle and eager to go, with an orthodontic appliance showing in the photograph to make it interesting dentally.

Single copies may be had for 5 cents, 50 copies for \$1.00, 100 for \$1.50, 500 for \$5.00, and 1,000 for \$7.50, from the Public Relations Bureau, American Association of Orthodontists, 292 Madison Avenue, New York, N.Y.

The Medical and Dental Care Program for Farm Security Administration Borrowers in the U.S.A.

Nearly 70,000 low-income farm families, or about 300,000 persons—borrowers from the Farm Security Administration — are banded into small groups to obtain medical care at a cost which they can afford. This medical program was an outgrowth of the desperate economic situation in which one-fourth of the farm population found itself during the depression.

Five years ago, nearly two million farm families were unable to support themselves without some kind of public aid. Flood and drouth had played havoc with crops; credit

had vanished; crops were selling at ruinous prices. It was a period of foreclosures and "penny" auctions. Farm families migrated from one area to another seeking work. For these stricken families, relief was the only means of support, until the Farm Security Administration began making small loans to enable farmers to make their own living from the land.

These rehabilitation loans, repayable within five years at five percent interest, pay for the seed, livestock, and tools necessary for farming operations. Often the loans also help the family to buy clothing and food until the next harvest.

To borrow from the Farm Security Administration, a farmer must be unable to get satisfactory credit from any other source, public or private; he must be physically able to run a farm, have farming experience, and must be located on a farm. Finally, he must be approved for the loan by a local county committee, which can vouch for his character and ability.

Every loan is based on guidance of the farm family during the period of rehabilitation, to make sure that the money is put to the best possible use. Farm Security Administration supervisors work with the farmer and his family until the loan is repaid, helping him to plan his farming operations and advising him on the most effective methods of raising crops, conserving the soil, and caring for livestock.

Most rehabilitation borrowers are rapidly repaying their loans and becoming self-supporting. It was soon apparent, however, that other families with equal opportunities were making slow progress. A careful investigation disclosed that more than half of the families which failed to make ends meet were handicapped by poor health. Knowing that they could not pay the bills, many of these people had hesitated to consult a doctor. They had let minor ailments go until they became grave. Then the family's livestock or farm tools often had to be sold at a sacrifice to pay for a serious operation or prolonged hospital treatment. Other farmers limped along for years with malaria, pellagra, hookworm, hernias, abscessed teeth or other chronic diseases, which cut down their working ability.

Consequently, the Farm Security Administration started a medical care program for its

borrowers, on the theory that a family in good health was a better credit risk than a family in bad health. So far as the government was concerned, this program was simply a matter of good business—if the family's health handicaps were cleared up, it could get back on its feet and become self-supporting; if they were not, the family might remain dependent on relief for years.

The entire program has been worked out in close co-operation with the State Medical Associations and local medical societies. Before a medical care plan is set up in any state, a memorandum of understanding is drawn up by FSA representatives and the State Medical Association. County agreements, based on this understanding, then are reached with local medical societies.

Although county medical plans vary in detail, according to local conditions and preferences, they follow a general pattern. They all provide for the use of existing local facilities, and fees are based upon the ability of the families to pay—a principle long recognized by the American Medical Association. Every plan is founded upon three basic principles: (1) Each family has a free choice of its physician from among the participating doctors; (2) Fees are paid by every participating family at the beginning of the operating period, and are held by a bonded trustee; (3) Fees are based upon the ability-to-pay of the families, as indicated by their farm management plans and records.

Benefits covered in the plan usually include: (a) ordinary medical care, including examination, diagnosis, and treatment in the home or in the office of the physician; (b) obstetrical care; (c) ordinary drugs; (d) emergency surgery; (e) emergency hospitalization.

Physicians' bills are paid from the amount on hand for a particular month, after the bills have been received by the trustee and reviewed by a committee of the local medical society. If possible, all bills are paid in full. If the total bills for a given month exceed the amount available, all bills are proportionately reduced and each physician is paid his prorata share.

The dental care activities which have resulted from the co-operative endeavours of State and local dental societies and Farm

Security Administration must be considered experimental in character. Our policy is to approach this problem through the organized dental profession in the United States. The general principles upon which any dental care plans are based include free choice of dentist, basing the cost of the plan upon the average ability of borrower families to pay, and placing all dental aspects of any plan under the direct supervision of the dental profession. It is hoped that definite patterns for handling the dental problems of these families may evolve from the efforts being made in a number of States at this time.

Dental care plans for borrower families have been organized as distinct plans, separate from medical care plans, in eleven States. In Michigan, Wisconsin, Missouri and Utah there are certain plans in effect or being organized at this time concerning which you could obtain detailed information from the respective state dental associations. Two of such plans in Michigan, two in Missouri, and two being organized in Wisconsin are of a service required to put mouths in a satisfactory condition. The estimates are reviewed by a committee of dentists, and individual family funds to cover such essential services as may be within the ability of the family to pay are set up in a special bank account in the hands of a trustee, and paid to the dentist upon completion of the work.

An example of the type of program just described is found in St. Charles County, Missouri. The plan was in operation for a one-year period, during which the average cost per family for minimum essential service was approximately \$46.00. Loans made to the families to cover the cost were so arranged as to be payable over a three-year period. The service included essential restorative dentistry. During the current year the dentists in St. Charles County have adopted a different type of plan for maintenance purposes, namely, one similar to those described below under the discussion of plans functioning in Arkansas and in a number of other southern States.

Separate dental care plans of a different type, typified by those operating in 43 counties in Arkansas, were functioning as of June, 1940 in one county in Virginia, eight counties in Alabama, three counties in Georgia,

two counties in South Carolina, five counties in Mississippi, and one county in New Mexico. The plans in Arkansas, which may be considered typical, were developed on the basis of a memorandum of understanding between the Arkansas State Dental Association and the Farm Security Administration. They are designed to meet some of the most urgent dental needs of a very low-income group of farm families. The services provided are confined to extractions, simple fillings, prophylaxis, and the treatment of infections. In Arkansas the families pay into a pooled fund on an annual basis the basic sum of \$3 per family plus 50 cents for every person in the family, or, for example, \$5.50 for a family of five. The fund is divided into twelve monthly allotments and dentists submitting bills for services to those persons who apply for necessary care are paid from the monthly allotments. When funds are insufficient to pay bills in full there is a pro rata distribution of the allotment. Reports indicate that the dentists are receiving from 70% to 80% of their bills submitted in accordance with their usual fee schedule.

In other southern States mentioned in the preceding paragraph there are some differences as regards the services and amounts paid by the families, but in general the pattern is the same as that followed in Arkansas. Informal understandings are in effect with the State Dental Associations in Alabama, Georgia, South Carolina and Mississippi.

In a number of existing medical care plans in Kansas, Nebraska, Tennessee and Colorado, particularly the first two States mentioned, some provision has been made for very urgent dental service, notably extractions. There is considerable discussion in connection with the Nebraska program regarding the possibility of setting up more complete dental care arrangement, presumably on a separate basis. As of June, 1940, this type of minimum provision for dental service as part of a medical care plan was found in 28 counties in Nebraska, 45 counties in Kansas, 3 counties in Tennessee, and 2 counties in Colorado.

The tendency at present is to organize separate dental care plans through the co-operation of the organized dental profession rather than to include a minimum amount of dental service, such as extractions, in a plan de-

signed primarily to provide medical care. Therefore, it is expected that any increase in the number of dental care plans in the coming months will be found in the field of separate plans rather than those constituting a phase of a general medical care program.—*From the Office of Foreign Agricultural Relations, U.S.A.*

•
Dr. Gottlieb Comes from Vienna to U.S.A.

Dr. B. Gottlieb, the well-known dental scientist, formerly of Vienna and more recently of Tel Aviv, Palestine, has come to the U.S.A. and is now located in the W. K. Kellogg Foundation Institute in the School of Dentistry of the University of Michigan. Dr. Gottlieb's status for this year will be that of a visiting teacher. He has brought with him his large collection of histo-pathologic specimens and he will give courses of instruction to graduate and post-graduate students in the various phases of dentistry. These will comprise oral and dental pathology and the histo-pathologic principles which underlie the fields of orthodontics, prosthodontics, root canal surgery, oral surgery, and periodontoclasia. Special courses in these various fields will be announced from time to time.

He will also be available for lectures and short courses of instruction before dental societies or other groups of dentists in various parts of this country. Arrangements for such outside engagements may be made by communicating with Dr. Paul Jeserich, Director of the Kellogg Institute.—*Jour., Michigan State D. Soc.*

•
Arizona Residents Reject Dental Advertising Restrictions

In the November 5 general elections, the residents of Arizona voted to reject the additional restrictions on dental advertising which had been enacted by the state legislature in 1939.

The dental societies conducted an active campaign to convince the voters that the amendments were worthwhile and should be retained but they were seriously handicapped by the opposition of several large newspapers in the state, as well as by important radio stations.

—A.D.A. Release.

IN MEMORIAM

Lt.-Col. Frederick Blyth Ross, of Hamilton, Ontario, aged 78, died February 26. He was a graduate of the Royal College of Dental Surgeons of Ontario and was a life-long resident of Hamilton. He joined the 13th Battalion, militia, in 1880, and was a member of the Canadian rifle team at the competitions in Wimbledon in 1883 and at Bisley in 1890 and 1899. He served in the South African war, commanding A Squadron, 6th Regiment, Canadian Mounted Rifles.

Lt.-Col. Ross was past president and life member of St. George's Benevolent Society; past master and life member of Barton lodge and a 32 degree mason. He was a member of the Murton Lodge of Perfection, Hamilton; Sovereign Chapter of Rose Croix and Moore's Consistory. He was also a member of the Hamilton Club, Towers Club, British Empire Club, of London; the Canadian Military Institute, from its organization; Ontario and Dominion Rifle Associations and the Hamilton Scientific Association. He received the long service medal and colonial and auxiliary forces Long Service Officers' decoration.

Lt.-Col. Ross is survived by his widow, a brother, two nieces and three nephews.

■
Captain Herbert Newton Heal, R.C.A., formerly well-known Calgary dentist, and for the past eight months a member of the Canadian Army (Active), died Friday night, March 14, in Winnipeg following three weeks' illness. Death followed an abdominal operation.

When the 22-78th Battery was mobilized on June 3, 1940, under Major T. L. Souness, Captain Heal went on active service, proceeding with the battery to Sarcee Camp, Camp Shilo and later Winnipeg.

Captain Heal was second in command of the 22-78th Field Battery, Royal Canadian Artillery. Only 38 years of age at the time of his death, he had formerly commanded the 95th Field Battery, R.C.A.,

N.P.A.M., at Calgary, holding the rank of major.

A native of Nova Scotia and a graduate of Dalhousie University, Halifax, he practised dentistry at Carmangay, Champion and Vulcan for five years. Before enlistment he had conducted a practice in Calgary for about seven years. During this time he was an active member of the Calgary Dental Society, and at the time of his enlistment for active service was the President. He left many friends in the City of Calgary who greatly regret his passing.

•
Milton F. Cross, of Ottawa, aged 72, died at the home of his son in Montreal on February 20. He was a graduate of the Royal College of Dental Surgeons and practised dentistry in Oshawa for some years before moving to Ottawa about thirty-two years ago. He retired from practice about five years ago.

Dr. Cross gained prominence as an author, having written a number of poems and articles for newspapers and magazines. For several years he was president of the Arts and Letters Club. He attended Dominion United Church.

Dr. Cross is survived by two sons, a daughter, a sister and a brother.

•
William Robert Wilkinson, of Kitchener, Ontario, aged 79, died February 23. He was a graduate of the R.C.D.S. of Ontario and of a Philadelphia school. He practised his profession in Kitchener for more than fifty years.

Dr. Wilkinson was a city councillor in 1906. He was a member of the Canadian Order of Woodsmen of the World and the I.O.O.F.

Dr. Wilkinson is survived by four sons, a daughter and ten grand-children.

•
Eric Dobbs, of Morse, Saskatchewan, aged 44, died in Regina, February 28, from heart trouble.

. . . SECTION FRANÇAISE . . .

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La Réimplantation des Dents*

Etude critique et application pratique par Dr méd. Fritz Schon
(Sammlung, Meuber, Heft 23)

par CHARLOTTE DUPUIS-MAYOR, Lausanne.

Lorsque l'on considère tout ce qui a déjà été publié sur ce sujet, il semble, à première vue, bien inutile et superflu d'y revenir encore. Il est toutefois étonnant de constater le nombre minime de confrères qui pratiquent couramment une opération de laquelle on peut affirmer, que le nombre de succès publiés et enregistrés dépasse de beaucoup celui des insuccès. On a trop tendance à la considérer comme une opération qui peut, il est vrai, avoir quelque intérêt expérimental mais qui n'a pas d'application pratique.

L'auteur de l'excellent petit ouvrage sus-indiqué, n'a pas voulu simplement nous faire adopter sa méthode en publiant encore une énumération de quelques centaines de cas couronnés ou non de succès. Il a entrepris de rechercher si les principes théoriques (résultats histologiques de l'expérimentation sur les animaux par Scheff et Römer) sur lesquels se basèrent ses prédécesseurs dans l'interprétation des résultats pratiques obtenus, étaient immuables ou s'ils n'avaient pas plutôt besoin d'être révisés.

Neuwirt a contrôlé, il n'y a que peu d'années, les expériences classiques de Scheff en se basant sur les récentes découvertes faites depuis.

Les résultats obtenus par Neuwirt dans l'expérimentation chez les animaux sont la plupart du temps en contradiction formelle avec les interprétations usuelles du processus de la réparation dans la réimplantation des dents. Partant de ce point de vue, l'auteur a entrepris une étude critique des différents procédés publiés jusqu'ici et en a, en quelque sorte, extrait une méthode simple, applicable dans la pratique courante et qui lui a permis d'obtenir d'excellents résultats. Le procédé perd son auréole "d'expérience

* Revue Suisse d'Odontologie.

chirurgicale" lorsque l'on veut bien, une fois pour toutes, se laisser persuader du fait acquis, que les résultats de la *réimplantation* en pratique courante sont de beaucoup plus favorables que ceux obtenus dans l'*implantation* et la *transplantation*.

Les premiers auteurs qui publièrent des résultats effectifs et authentiques croyaient la vitalité de la pulpe indispensable à la consolidation de la dent replantée. Plus tard et jusqu'à nos jours, l'intégrité plus ou moins effective du périoste de la racine était considérée par la plupart des auteurs comme la condition *sine qua non* de réussite. Les travaux de *Neuwirt* nous ont enfin apporté la preuve histologique que le rôle du périoste avait été de beaucoup exagéré vis-à-vis d'autres facteurs, indispensables eux à la réussite de l'opération.

Une bonne technique seule n'est cependant pas l'unique déterminante de la réussite d'une intervention. Le praticien, pour réussir, doit faire preuve d'un discernement subtil dans son diagnostic et son pronostic, ce qui l'amène à restreindre le nombre de ces opérations aux seuls cas favorables.

Au point de vue historique il est intéressant de constater qu'*Ambroise Paré*, en 1594, parle de réimplantation des dents dans son traité de chirurgie. Un travail, relatant la reconsolidation d'une prémolaire extraite par mégarde puis replantée, attribué à *Denys Pomaret* parut à Genève en 1670. Dès lors, les travaux et les thèses abondent.

Il n'est toutefois pas permis de passer sous silence les études de *Weski* sur la biologie de "l'Organum dentale", les recherches de *Gottlieb* sur l'épithélium dentaire, celles sur les maladies paradentaires (clinique et histologie) le merveilleux travail de *Shmamine* sur l'histobiologie du ciment, toute la littérature moderne sur les transplantations en chirurgie générale.

Neuwirt a prévu toutes les possibilités dans ses 100 expériences faites sur 17 chiens, et fait les constatations suivantes:

1° Au contraire de *Scheff*, qui considère la réunion des éléments cellulaires du périodonte en première intention avec le ciment intact comme condition idéale en vue de la consolidation définitive d'une dent replantée, *Neuwirt* constate que les conditions sont les plus favorables lorsqu'il y a apport plus ou moins grand de tissu osseux provenant d'un milieu riche en ostéoblastes qui viennent se fixer sur un périoste intact.

2° L'opinion de *Fridels*, *Scheff*, *Römer*, selon lesquels le périoste de la racine se réunit *per primam* au périoste de l'alvéole, ne correspond pas au fait. Les parcelles de périoste resté adhérent à la racine, sont toujours résorbées au bout de peu de jours et remplacées par du tissu de néoformation.

3° Le maintien du périoste aide au succès de l'opération mais n'est pas absolument indispensable. Des dents dont on a soigneusement gratté et poli la racine, reprennent aussi bien que d'autres pour lesquelles on a pris toutes les précautions afin de respecter l'intégrité du dit périoste.

4° De toute importance pour le succès sont: a) Maintien du périoste alvéolaire. b) Adaptation exacte de la racine aux parois de l'alvéole. c) La surface de la dent ainsi que le pari alvéolaire et les gencives doivent être intactes. d) La fixation doit être parfaite.

5° Les dents de lait peuvent être réimplantées aussi bien que des permanentes. Elles se maintiennent jusqu'au moment de la résorption physiologique normale.

6° Le terrain joue un rôle important dans la réussite d'une réimplantation. Les conditions sont favorables lorsque la dent est réimplantée dans des tissus osseux et autres *peu vascularisés*, mais beaucoup moins dans du tissu spongieux.

7° Seul le ciment peut, dans des conditions très favorables, exceptionnellement rester intact (processus analogue à celui d'une greffe osseuse).

8° Le ciment primaire semble être plus résistant à la résorption que le ciment secondaire.

9° Le sort d'une dent réimplantée ne semble pas toujours dépendre uniquement de l'évolution des tissus extérieurs de la racine, mais souvent des phénomènes de voisinage entre dentine et pulpe.

10° Le tissu qui remplit parfois la chambre pulpaire est au point de vue histogénique, toujours un tissu du voisinage de la dent réimplantée sans considération pour sa structure histologique. *Neuwirt* n'a jamais pu constater de prolifération sur des cellules de tissus réimplantés.

11° Lorsque la réimplantation a été faite avec tout le soin désiré, on peut observer la restauration du ligament primitif.

EXPERIENCE SUR LES ANIMAUX ET LEURS APPLICATIONS DANS LA REIMPLANTATION

Il est un fait certain, reconnu déjà par les auteurs anciens qu'une dent réimplantée se consolide *d'abord dans sa partie coronaire*, ensuite dans la région apicale. De même que tout processus de résorption commence à l'apex.

Pour conclure à l'identité des résultats constatés microscopiquement chez les animaux à ceux acquis empiriquement chez l'homme, il faut d'abord prouver que les réactions périapicales chez l'un et chez l'autre sont identiques. Si toutefois, elles ne le sont pas absolument tant au point de vue pathologique qu'au point de vue physiologique, il faut une fois pour toutes se faire une idée précise des résultats que l'on peut identifier sans autre à ceux concernant l'organum dentale humain et de ceux qui en diffèrent essentiellement.

1° Il y a tout d'abord des différences anatomiques, biologiques, pathologiques de l'organum dentale (dents, périoste, os).

2° Il y a une *différence de nature* entre l'homme et le chien.

3° Il y a des différences dans le *paradentium*, dans l'*articulation*, dans l'*alimentation*, dans la *salive*:

1a. Il ne faut pas perdre de vue que le canal pulpaire des dents de chiens se termine à l'apex par le Delta bien connu (un grand nombre de canaux larges ou étroits), ce qui peut amener à modifier passablement l'image microscopique lorsque l'on veut interpréter les résultats obtenus dans un traitement chez l'homme.

2a. En biologie, l'étude de la question de l'immunité, des antigènes, des anticorps, nous enseigne que les réactions chez l'homme et chez l'animal sont loin d'être identiques. Si l'animal réagit à une injection de germes infectieux le plus souvent par une septicémie, l'organisme de l'homme se défendra plus facilement par formation localisée d'un abcès.

Si l'on peut admettre une certaine similitude d'image histopathologique des racines de chiens avec celles des racines chez l'homme, il faut toutefois se garder de conclure à l'identité. Là où des ingrédients chimiques agissent sur le tissu périapical, la différence de réaction chez le chien et chez l'homme dépend des différences de structure anatomique. On trouvera donc éventuellement dans les deux cas des infiltrations cellulaires, des leucocytes, des lymphocytes, des cellules plasmatiques, des fibroblastes. Lorsque, par contre, il s'agit de modification due à la force masticatoire ou à une infection, la comparaison se complique. Les résultats expérimentaux ne concernent que les incisives, rarement des prémolaires, jamais les dents à plusieurs racines, du fait des difficultés qu'il y aurait à traiter ces dents-là chez le chien. De plus, la plupart des dents furent réimplantées sans traitement rationnel de la cavité pulpaire.

Une pulpe nécrosée, non infectée (choc, articulation défectueuse, surchauffage etc.) peut être la cause de toutes les modifications périapicales trop connues telles la résorption, le granulôme, etc.

La plupart du temps, chez le chien, le remplacement du tissu pulpaire nécrosé se fait sans complication aucune par le tissu de voisinage.

Il y a donc là contradiction formelle.

Tandis que chez l'homme, la surcharge d'une dent ou d'un groupe de dents par la

mastication provoque de l'atrophie osseuse, le manque d'antagoniste au contraire de l'hypercémentose; chez l'animal on constate l'inverse.

Si donc, les réactions aux traumatismes aigus (mécaniques, chimiques, bactériels) paraissent être les mêmes chez l'animal et chez l'homme, d'après ce que nous pouvons conclure des images histopathologiques, elles sont loin d'être les mêmes quand nous nous trouvons en présence d'actions chroniques.

CONDITIONS ET INDICATIONS DE REIMPLANTATION

1. *Le patient.*

On admet en général que chez les jeunes sujets seulement la réimplantation donne de bons résultats. La réussite est tout aussi bien assurée chez les sujets d'un certain âge à condition que la fixation soit suffisante et maintenue assez longtemps.

1° Dans des cas d'*hémophilie*, certains auteurs ont utilisé la dent extraite comme tampon pour arrêter l'hémorragie. Il faut toutefois penser à la possibilité d'hémorragies secondaires en nappe ou à l'infection.

2° Lorsqu'il y a *gingivite aigüe ou chronique*, il est indispensable d'en entreprendre le traitement complet avant de procéder à la réimplantation, le bord gingival jouant précisément un rôle prépondérant dans la fixation de la dent réimplantée.

3° Dans les cas de *pyorrhée*, un traitement préalable de l'affection s'impose. Il faut toujours maintenir la dent réimplantée *longtemps* dans une gouttière appropriée. Il s'agira de poser le pour et le contre du maintien d'une telle dent qui peut compliquer outre mesure et sans utilité aucune la confection d'un appareil de fixation.

4° Dans tous les cas où le traitement radiculaire devient un véritable supplice et pour le praticien et pour le patient, la réimplantation est la méthode de choix, ainsi chez les patients particulièrement nerveux; dans les cas où même avec la digue il est impossible d'assécher suffisamment la cavité; chez les clients présentant soit des troubles respiratoires, soit des crampes du masséter, des vomissements intempestifs ou encore de la macroglossie. Bref, dans tous les cas où il est pour ainsi dire, humainement impossible de faire en bouche une obturation de racines correcte.

5° Bien des personnes, ne disposant que d'un temps très limité placées devant l'alternative d'un traitement demandant un certain nombre de séances ou d'une intervention faite d'une seule séance n'hésiteront pas longtemps à opter pour la petite intervention chirurgicale.

II. *La dent à réimplanter.*

Depuis que la résection apicale est entrée dans la pratique courante pour les monoradiculaires, la réimplantation n'a sa raison d'être que pour les molaires. Si, pour une raison ou pour une autre, la réimplantation d'une incisive, voire même d'une canine devenait indispensable, sa fixation dans une gouttière quoique souvent malaisée doit être faite avec le plus grand soin.

Des dents de lait expulsées accidentellement, remises et maintenues en place peuvent reprendre leur fonction normale, surtout lorsqu'elles adhèrent encore quelque peu à la gencive ou à l'alvéole.

Indications.

a) La réimplantation est indiquée dans tous les cas de dents expulsées accidentellement et ceci après nettoyage et obturation de la racine hors de la bouche. Fixation par gouttière de métal ou par des bagues et des ligatures sur les dents voisines.

b) Lorsqu'une dent saine est extraite par erreur. Procéder à l'obturation immédiate de la racine.

c) Réimplantation de la deuxième molaire extraite pour faciliter l'extraction de la troisième. Traitement de racines indispensable.

En pratique courante:

A. *Dents saines.* a) Présentant des caries impossibles à obturer proprement en bouche.

Piliers de pont à dévitaliser et dont les racines présentent de trop grandes difficultés d'obturation. Dents atteintes de périodontite arsénicale. Instrument cassé dans la racine. Perforation, canaux inaccessibles (calcification pulpaire).

Il faut, dans pareil cas attendre la consolidation parfaite, du pilier avant d'entreprendre le travail de pont définitif et éventuellement en assurer la stabilité en prenant un appui supplémentaire.

B. *Dents malades.* a) D'après le diagnostic clinique de l'état des canaux. Pulpites résiduelles résistant aux moyens habituels (haute fréquence, diathermie, phénolcocaïne, etc.). Canaux putrides dont le traitement est rendu malaisé ou impossible. Dans les cas aigus avec formation d'abcès; attendre la régression des phénomènes inflammatoires avant de procéder à la réimplantation.

b) *D'après radiographie.* 1° Canaux fortement recourbés; 2° granulôme peu De petits foyers granulomateux guériront sans curettage après réimplantation d'une dent dont les racines auront été obturées soigneusement, soit qu'ils soient arrachés au étendu et circonscrit; 3° gros granulôme ou kyste.

moment de l'extraction, soit qu'il y ait autothématothérapie du granulôme par le sang répandu (excitation à la résorption et à la réorganisation des tissus infectés), soit enfin que l'organisme lui-même lutte victorieusement contre les bactéries.

S'il y a de gros kystes, impossibles à curetter par le petit orifice du fond de l'alvéole sans léser le périoste de la paroi alvéolaire, le pronostic est le plus souvent mauvais. Il pourra peut-être être meilleur par la suite si l'on arrive à cautériser l'épithélium de la paroi du kyste par la diathermie chirurgicale (électrode en boucle introduite dans le kyste même).

4° Granulômes interradiculaires. Pronostic bon.

5° Pour tous les cas de perforation radiculaire ou du plancher pulpaire, instruments cassés dans les racines, etc., la réimplantation systématique est la méthode de choix.

1° Préparation.

Avant de procéder à l'opération, il faut avoir bien soin de mettre la bouche en parfait état en traitant toute manifestation de maladie aiguë ou chronique. Chez les sujets jeunes dont les gencives sont saines, un nettoyage et détartrage suffira. S'il y a des cils de sac pyorrhéiques il faut commencer par les nettoyer. Une gencive normale n'est pas seulement une barrière contre la pénétration des germes infectieux dans l'alvéole, mais elle sert avant tout à la rétention mécanique de la dent dans l'alvéole.

Une considération qui fut jusqu'ici trop négligée et qui a une grande importance se rapporte au coefficient de mastication de toute la mâchoire. Lorsque la dent à réimplanter se trouve être dès le début ou même à l'avenir le point de la plus forte pression de mastication et que son exclusion momentanée ou que le déplacement des forces actives sur l'autre côté de la mâchoire n'est pas possible (dents manquantes, prothèses articulant mal ou peu, dents mobiles ou déversées) le pronostic de sa durée sera d'autant moins bon. Dans tous les cas, une dent ne peut jamais servir de point d'appui pour un crochet de suite après sa réimplantation. Plus les forces agissant latéralement seront diminuées, tant immédiatement après la replantation qu'une fois la guérison parachevée et plus sa durée sera grande.

Si l'on mesure après guérison la force de mastication du côté correspondant, elle est redevenue égale à celle du côté sain et peut même parfois être plus grande.

2° L'opération.

L'extraction se fait sous anesthésie régionale ou locale.

Il faut avoir bien soin de ne pas briser le bord alvéolaire par une luxation trop brusque ou trop accentuée. Ce n'est pas qu'une lésion osseuse puisse compromettre le résultat de la guérison, mais les douleurs postopératoires sont plus intenses et il

peut y avoir élimination d'un séquestre qui complique un peu et retarde la guérison. Utiliser où faire se peut l'élévateur et le davier à bec de faucon. N'employer la pince à racines que lorsque la partie coronaire de la dent est complètement détruite et dans ce cas luxer avec précaution. L'auteur estime absolument indispensable de procéder tout d'abord à une *préparation soignée de la gencive*.

Si la rupture d'une racine a nécessité une intervention chirurgicale à l'intérieur de l'alvéole, il vaut mieux renoncer à la réimplantation pour éviter un échec. Il est incontestable qu'une molaire amputée d'une racine et réimplantée peut se consolider. Elle ne récupérera toutefois jamais sa force masticatrice normale et sa durée sera limitée. Une telle réimplantation peut se faire à titre d'essai, mais elle reste dans le cadre des expériences dont le résultat dépend de l'habileté de l'opérateur et de plusieurs facteurs dus au hasard.

3° Manipulation de la dent extraite.

Antisepsie? Asepsie? L'auteur préconise des antiseptiques doux n'altérant pas les tissus. Il s'en tient au Rivanol. La désinfection par lavage de l'alvéole est superflue. Placer après l'avulsion un tampon lâche de gaze stérile à l'iodoforme si l'on veut, qui restera en place pendant le traitement de la dent. On fera sortir le sang et le suintement de l'alvéole une fois la dent réimplantée en pressant et massant légèrement la gencive le long des racines de l'apex au bord gingival.

Enlever les lambeaux de périoste et d'os restés adhérents à la racine. Celle-ci doit être laissée ou rendue aussi lisse que possible. Se garder d'y faire des soi-disant rainures de maintien.

On devra souvent enlever l'apex. Il faut cependant prendre garde de ne pas enlever trop de matière ce qui laisserait un vide que l'os néoformé aura peut-être bien de la peine à combler.

Il faut à tout prix épargner le périoste alvéolaire. C'est là la condition primordiale pour la réussite parfaite de l'opération car c'est lui qui formera l'os nouveau d'où dépendra la solidité de la dent.

D'après *Faust*, la résorption qui tôt ou tard amène l'expulsion de la dent dans certains cas, serait due probablement au passage à travers le ciment de restes de médicaments caustiques employés pour le traitement du canal. C'est pourquoi l'auteur lave abondamment la dent à l'eau chaude avant de la replacer dans l'alvéole, enlevant ainsi même le Rivanol restant sur la racine.

Pour l'obturation des racines, chaque praticien utilisera la méthode qui lui donne les meilleurs résultats dans la pratique courante. Il n'est pas recommandé d'obturer l'apex à l'amalgame.

4° Fixation et articulation de la dent réimplantée.

La fixation est une des conditions essentielles de réussite. Pour les molaires pluriradiculaires, on peut, en général, se passer de moyen artificiel de fixation. Si l'extraction a été faite proprement, la dent remise en place ne bouge pour ainsi dire pas dans son alvéole. S'il s'agit de dents isolées ou fortement mobiles, une gouttière est indispensable.

Une fixation simple et rapide indiquée par *Cieczynski* consiste à passer un fil de ligature Krupp dans les espaces interproximaux des dents voisines, lier et serrer. Deux bouts de fil seront passés respectivement dans chacun des espaces interproximaux de la dent réimplantée et bouclés aussi solidement que possible. La dent malade est ainsi solidement maintenue en place. D'autres se fixeront au moyen de gouttière, d'autres encore par des bagues soudées, etc. etc.

Si une dent réimplantée est encore mobile trois à quatre semaines après l'opération, il ne faut pas conclure à un échec, mais la fixer à ce moment encore. Elle se consolide dans la suite. Le problème de la mise au repos d'une dent réimplantée ne dépend

pas de sa fixation seulement, mais aussi de sa mise *hors articulation*. Ceci se fait le plus simplement en meulant la couronne de façon à ce qu'elle n'articule plus du tout dans aucune des positions normales, surtout pas latéralement. Hausser l'articulation en agissant sur les molaires de l'autre côté n'est pas recommandé. La dent, une fois guérie, sera reconstruite par un amalgame, un inlay ou même une couronne.

5° Soins postopératoires.

Il faut insister auprès du patient pour qu'il tienne sa bouche en état de propreté parfaite. Vérifier de temps en temps l'aspect de la dent. Le gencive doit être saine au collet, sans formation de bourrelets ou de cul-de-sac. Dans ce cas, les traiter par une quelconque des méthodes usuelles dans les soins de paradentose. (Cautérisation gingivectomie paraffine, etc.)

6° Vérification du résultat

Pour le praticien, l'avis du patient est le critère de réussite ou d'échec.

Les douleurs postopératoires des jours qui suivent l'opération ne sont, ni plus, ni moins fortes qu'après une extraction. Prescrire un sédatif aux patients spécialement sensibles. Des douleurs subites et violentes n'ont jamais été signalées. Elles seraient dues à une mise hors contact insuffisante.

Le contrôle radiographique correspond au tableau clinique. Il est intéressant de constater la résorption lente de l'apex et l'apparition progressive des travées-osseuses.

L'auteur mesure la pression de mastication d'après la méthode de *Haber*. Lorsqu'elle est redevenue normale, il estime que la dent peut être réparée et reprendre ses fonctions normales.

Hygiène Dentaire

RAPPORT INTERIMAIRE d'une enquête faite à New-York
par les Drs Jean Brault et Armand Fortier, sur la question
d'HYGIENE DENTAIRE, son fonctionnement et quelques
observations sur son application ici.*

La Commission d'Hygiène Dentaire, chargée par le bureau des gouverneurs d'étudier cette question vitale pour notre population et notre profession, vous présente un rapport intérimaire.

Après s'être enquis de la situation dans cette province et dans la province d'Ontario, elle a cru bon de déléguer deux de ses membres dans la ville et l'état de New-York, afin de s'enquérir sur place des mesures prises pour faire face à cet important problème.

La situation dans la province de Québec vous est connue: Il y a actuellement six dentistes attachés à autant d'Unités Sanitaires, employés à demi-temps et rémunérés par le Ministère de la Santé. Ils y font, auprès de la classe scolaire, et de l'enseignement de l'hygiène et des traitements: prophylaxie, extractions et obturations. Le département se déclare satisfait des résultats obtenus à date dans ces différents arrondissements, tant au point de vue amélioration de l'état de santé de la bouche qu'au point de vue de l'intérêt que ce mouvement éveille chez tous ceux qui sont en contact avec ces enfants. Vous connaissez tous l'excellent travail accompli par l'Unité Mobile subventionnée par la Croix Rouge Canadienne, et dont le personnel soigne les populations les plus éloignées des grands centres de cette province.

* Rapport lu par le Dr Jean Brault à la séance du 20 décembre 1940, aux membres du Bureau des Gouverneurs des C.D.P.Q.

Le problème de l'Hygiène Dentaire dans l'état de New-York est résolu comme suit:

"ARTICLE IV, of the Regulations of the Commissioner of Education governing Health and Education, reads thus: Provision for health teaching: It shall be the duty of the trustees and boards of education to provide a satisfactory program of instruction in health, in accordance with pupil needs in all grades. This program shall be integrated in suitable manner with the whole school curriculum and the equivalent in time of at least one school period a week shall be devoted to such instruction."

Traduction: "A l'ARTICLE IV des Règlements promulgués par le Surintendant de l'Instruction publique concernant la Santé et l'Education physique, on lit ce qui suit: Il est du devoir des commissaires et des commissions scolaires d'établir un programme d'enseignement de la santé d'après les besoins des élèves dans toutes les classes. Ce programme sera intercalé de façon convenable dans le programme complet d'enseignement et une durée de temps égale à une demi-journée de classe par semaine devra y être consacrée."

C'est sur ce principe que repose tout le système d'éducation en Hygiène Dentaire dans l'état de New-York et les villes de cet état. C'est un fait reconnu par les hygiénistes de carrière que le seul fait de traiter les dents des indigents n'avance en rien chez eux le développement de l'hygiène de la bouche. Il faut donc que ces connaissances soient inculquées en même temps que les rudiments de l'orthographe ou du dessin.

Dans l'état de New-York, la vulgarisation de l'hygiène de la bouche est faite par 350 hygiénistes dentaires, système qui existe d'ailleurs dans 46 des 48 états américains actuellement. Ces hygiénistes suivent un cours de deux ans; leurs études portent sur les grandes lignes de la physiologie, nutrition, diète, formation et éruption des dents, psychologie enfantine et pédagogie. Elles sont sous l'autorité du département de l'hygiène orale, mais payées par les commissions scolaires locales.

Elles ont le statut d'institutrices et travaillent en corrélation avec les autres institutrices dans les matières qu'enseignent celles-ci (dessin, épellation, leçon de choses, etc.); leur champ d'action s'étend des classes enfantines au Senior High School. Leur fonction est d'enseigner l'Hygiène Dentaire aux enfants et aux institutrices et aux parents, et aussi de faire de la prophylaxie dans les deux sens que nous attachons à ce terme. Tel que mentionné plus haut, elles tentent d'enseigner l'Hygiène Dentaire par le médium d'autres matières déjà au programme, ou en faisant des pantomimes où la brosse à dents, la bouteille à lait ou le légume vert jouent un premier rôle.

L'avantage d'employer des hygiénistes pour faire l'enseignement dentaire est que: elles peuvent traiter le sujet de façon objective, n'y introduisant aucun détail ou terme technique et en ne s'égarant pas dans des conclusions d'ordre pathologique—leurs connaissances de psychologie enfantine et de pédagogie leur sont aussi d'une grande aide. Un autre avantage, d'après les chefs de départements eux-mêmes, de ne pas employer de dentistes dans ces fonctions, serait que les parents de ces enfants ne peuvent s'attendre à ce que ces hygiénistes leur prodiguent des soins professionnels gratuits.

Elles ne font aucun diagnostic, mais seulement des constatations et elles dirigent les enfants chez le dentiste. Quand après un certain laps de temps l'avis n'a produit aucun résultat, l'hygiéniste voit elle-même les parents de l'enfant et tâche de leur faire comprendre tous les maux qui peuvent découler du mauvais état de la bouche au point de vue: 1^o physique—2^o rendement scolaire—3^o esthétique—4^o fonctionnel, etc. etc.

L'Etat de New-York n'a pas compilé de statistiques complètes pour plusieurs raisons; d'abord, parce que le United States Health Service en a établies pour le pays tout entier et que les conditions varient très peu d'un état à un autre. Ces statistiques varient aussi selon les conditions locales, mais elles montrent en général une fréquence de carie de 95% chez l'enfance scolaire. Et ensuite, parce que de telles statistiques ne nous révéleraient rien que nous ne savons pas, à savoir: que la carie dentaire est la maladie la plus fréquente et la plus répandue chez l'enfant. De plus, de telles statistiques seraient quelquefois trompeuses, par exemple dans le cas d'un centre rural où existe un système d'hygiène bien établi et qui serait tout à coup envahi par une population à la suite de l'établissement d'une nouvelle industrie.

Voici cependant quelques faits qui intéresseront sans doute les autorités civiles et militaires: aux Etats-Unis 23% des conscrits qui furent rejetés, l'étaient à cause d'un mauvais état de leurs dents. Dans l'Etat de New-York, dans un centre donné, sur une population de 1200 enfants 13% perdaient une ou plusieurs dents permanentes. Après 5 ans d'hygiène dentaire organisée, cette proportion fut abaissée à 1/2 de 1%. Chaque hygiéniste donne son enseignement à environ 1500 enfants. Chaque classe d'enfants reçoit par enseignement direct 1/2 heure d'hygiène dentaire par semaine.

L'élève doit produire une note dentaire à chaque semestre, basée sur le soin qu'il a pris de sa bouche et l'intérêt qu'il a manifesté à l'enseignement dentaire, par un dessin original ou d'autre façon. Au commencement de chaque semestre il subit un examen médical complet et si ses dents sont en mauvais état il doit, pour être admis en classe, produire un certificat de son dentiste attestant qu'un traitement a été institué et doit se continuer. Tel est, dans ses grandes lignes, le système d'éducation dentaire en opération dans l'Etat de New-York.

A côté et comme complément de celui-ci, il existe un système de traitements dentaires ou phase réparatrice ou curative de l'hygiène dentaire; ces soins ne sont qu'à l'intention des indigents.

A ce sujet, dans tout système que nous établissons, il serait indispensable de définir de façon non équivoque ce que constitue "un indigent". La définition en varie d'une région à une autre. Dans la ville de New-York, le conseil des hôpitaux et les conseils médicaux des 5 comtés qui forment cette ville, ont défini l'indigent en se basant sur un couple ayant un enfant, dont le revenu hebdomadaire est de \$24.00; ce niveau est considéré trop élevé par plusieurs membres de la profession, de New-York.

Quoi qu'il en soit, les soins dentaires sont prodigués à ces indigents par plusieurs organismes n'existant pas au Canada, tels que le W.P.A., La Pension aux Vétérans et à leurs dépendants, le Farm Relief Board, et dans les cas où ces organismes n'entrent pas en fonction, le Département de la Santé de l'Etat s'en charge, d'après les dispositions de l'Article X, section 83, de la Public Welfare Law. Cette loi ne doit pas être interprétée de façon à décourager les efforts des agences volontaires telles que La Croix-Rouge, Kiwanis, Rotarians, Lions, etc.

Lorsque les indigents requièrent des soins médicaux ou dentaires, d'après les dispositions de la loi citée plus haut, c'est le Département du Bien-Etre public qui s'en charge, et non le Département de l'Education. Ce département a des cliniques qu'il contrôle, ce qui correspond à nos Unités Sanitaires, et des dentistes y remplissent une fonction analogue à celle de nos dentistes dans nos Unités Sanitaires.

L'on voit par là que les soins dentaires aux indigents ne sont considérés qu'un complément de cette grande croisade qu'est la vulgarisation de l'hygiène dentaire dans un état ou une province. Maintenant, passons rapidement en revue le service d'hygiène dentaire tel qu'opérant dans la ville de New-York.

Il se compose d'un surintendant: Dr. Harry Strusser, et de 130 dentistes

prodiguant leurs soins dans 140 cliniques scolaires de la ville. Ces dentistes sont employés à 1/2 temps. Le fait d'employer des dentistes plein temps n'est pas pratique, du moins dans les cliniques scolaires, à cause de l'espace de temps restreint où il peut être utile. Ces dentistes travaillent donc 15 heures par semaine, soit 5 sessions de 3 heures ou 200 sessions par année. Leur salaire est de \$1000.00 par année et 12 jours de vacances payées. Leur engagement ne tient que pour une durée de 5 ans. Le personnel est ainsi renouvelé par rotation à raison de 40 praticiens par année. On exige des candidats 5 ans d'expérience pratique; de plus ils subissent un examen théorique, oral et écrit et un examen pratique.

Toutes ces restrictions et surtout le fait de limiter le service au 1/2 temps fournissent l'avantage, d'après le Dr. Strusser, d'avoir des dentistes ayant une clientèle active et s'y intéressant, et en éloignent ceux qui, désabusés du bureau, voudraient se faire d'un tel emploi une position de tout repos et par conséquent pencheraient vers le fonctionnarisme et son déplorable désintéressement. Ces dentistes ont 10 surveillants, eux aussi 1/2 temps, qui vont d'une clinique à l'autre, coordonnant le fonctionnement dans un même district tout en surveillant les soins donnés par les cliniciens.

A New-York encore, on divise l'Hygiène Dentaire en deux branches distinctes:

"A"—Éducationnelle.

"B"—Réparatrice ou curative.

128 hygiénistes ont charge de l'aspect éducationnel. Elles y jouent le même rôle que les hygiénistes de l'Etat de New-York, enseignent et coordonnent l'enseignement de l'hygiène. Ce service se fait d'une façon intensive durant les quatre premières années, à la suite desquelles les enfants sont en possession de toutes leurs dents permanentes, y compris la 2^e molaire; mais il a été constaté par ces mêmes surintendants que même après quatre ans de soins dentaires assidus, si l'éducation n'a pas été menée de pair, on revoit ces mêmes élèves au High School pour constater qu'ils n'ont pris aucun soin de leur bouche—signe que les parents se fiaient entièrement sur l'Etat pour ce service.

Il resterait encore à traiter des campagnes intensives d'hygiène dentaire avec l'aide des compagnies d'annonces, des compagnies de transport et des journaux.

On pourrait également parler des causeries à la radio, faites non d'après les anciennes méthodes qui sont plus ou moins écoutées, mais des Sketches courts, dialogués dramatisés au besoin ou encore des conversations improvisées autour d'une table (round table talks) où est traité un aspect intéressant de notre profession (l'esthétique d'un dentier, foyer d'infection, etc.).

Je termine ici cette étude déjà longue pour un rapport que nous avoins qualifié d'intérimaire.

Le Dr. Aimé Fauteux, qui n'est pas ici ce soir pour raison de santé, avait été chargé d'approcher les autorités provinciales au sujet de l'Hygiène Dentaire. Il vous fera lui-même part des résultats de sa mission, mais sans être taxé d'indiscrétion je puis vous dire que le gouvernement actuel est plus que gagné à notre cause et je suis certain que le Dr. Aimé Fauteux aura des choses intéressantes à vous communiquer.

Nous vous soumettons donc humblement, Messieurs, les résultats de notre enquête. Nous comprenons que l'adoption d'un plan provincial d'Hygiène Dentaire, basé sur les constatations faites aux Etats-Unis, serait tout différent de la conception que nous nous en étions faite jusqu'à présent.

L'application de ce plan demanderait certaines modifications du programme des écoles élémentaires de cette province. Il exigerait la fondation d'une école d'hygiénistes dentaires, et par conséquent des modifications à notre loi à cet effet.

Nous aurions peut-être à transformer la conception qu'ont nos confrères de l'Hygiène Dentaire. Tout le problème se résume à savoir si l'on doit traiter le mal avec des palliatifs et par des efforts sporadiques, ou si l'on doit fermement appliquer un remède efficace et permanent. Il nous semble que ce qui doit nous guider n'est pas tant ce qui a été fait (ou ne l'a pas été) par le passé, mais bien ce qui est reconnu comme la meilleure méthode et ce, dans les régions les plus avancées dans ce domaine. Nous ne concluons pas à l'adoption intégrale du plan tel que celui fonctionnant dans les Etats Américains. Nous croyons que certaines modifications seront nécessaires avant de rendre un tel projet applicable à notre province.

Nous vous invitons cependant à le prendre en sérieuse considération, à l'étudier, le critiquer et à y apporter quelques suggestions que vous croirez propres à en faciliter l'application.

Le Congrès

Si certains événements dont nous voudrions voir l'issue prochaine nous font trouver le temps affreusement long, il n'en est pas moins vrai que les semaines passent avec une rapidité déconcertante. Demain, ce sera juin et le congrès de Québec. Aurions-nous tort de nous y préparer tout de suite?

Québec, ville historique entre toutes, devrait à elle seule nous attirer puisqu'elle renferme nos confrères dont l'hospitalité légendaire est bien connue.

Mais il y a vraiment un intérêt scientifique d'assister à ce congrès. Des conférenciers de Chicago et de New York, les meilleurs films qui aient été donnés dans ces villes, nous aurons tout cela. Qui donc peut prétendre en savoir assez pour ne pas se sentir intéressé.

Conseils Pratiques

Recueillis par A. AMOEDO

Un nouvel anesthésique dentinaire "Le fluorure de sodium".

Le fluorure est rapidement absorbé par la dentine et forme une couche de dentine fluorisée à travers laquelle les sensations douloureuses du fraisage ne passent pas.

En présence de dentine cariée il faut faire la pâte suivante:

Fluorure de sodium	}	ââ
Carbonate de sodium		

dont on dépose une boulette dans la cavité.

J. LUKOMSKY, de Moscou, *Dental Outlook per South African D. J.*

Nettoyage du champ opératoire pendant l'extirpation pulpaire.

Nettoyage de la dent à traiter et des voisines avec du savon liquide.

Large irrigation à l'eau oxygénée.

Pose de la digue.

Stérilisation du champ opératoire avec le mélange ternaire suivant:

Alcool 90°	}	ââ
Ether		
Chloroforme		

Ce mélange sera employé pour tous les nettoyages nécessaires de la chambre pulpaire.

G. MAHE, *Revue de Stomatologie.*

Mixtures pour gargarisme.

Essence de Menthe }
Essence d'Origan } ââ 0 gr. 50

Teinture de Myrrhe..... 20 grammes

Teinture de Quillaya..... 10 grammes

Une demi-cuillerée à café pour un verre d'eau bouillie tiède: en gargarisme dans les stomatites, dans les glossites et dans les angines.

"Rince bouche" apéritif.

Teinture de Fève de Saint-Ignace 2 grammes

— de Menyanthe 3 grammes

— d'Absinthe 4 grammes

— de Chardon bénit 5 grammes

— de Camomille 6 grammes

— d'Anis vert 10 grammes

XXX gouttes dans un verre d'eau de Vichy à 38° avec lequel on se rincer la bouche pendant 3 ou 4 minutes immédiatement avant les repas (anorexie par insuffisance de la sécrétion gastrique).

Revue de Phytothérapie, fevrier 1938.

A propos des radiographies.

Jamais la radiographie seule ne doit décider d'un diagnostic. Il faut toujours que l'examen clinique concorde avec l'interprétation radiographique.

Un mauvais négatif est meilleur qu'une épreuve positive.

On ne doit jamais examiner un négatif à la lumière directe. A défaut de négastocope, prendre une feuille de papier blanc, qui servira de réflecteur.

J. M. FERNANDEZ, *Revista Odontologica.*

Obturation en amalgame.

Pour faire une obturation parfaite en amalgame, il est préférable de mettre la digue. Englober plusieurs dents. Préparer la cavité comme pour une aurification, ne biseauter que le bord gingival. Ne retirer la digue qu'après durcissement de l'amalgame.

CHARLES WOODBURY,

Journal California State Dent. Ass. per Year Book of Dentistry.

Pour aider l'évolution des dents de sagesse.

Lorsqu'une troisième molaire évolue en position vicieuse, bien nettoyer l'espace interdentaire avec une solution de nitrate d'argent à 10%, bien sécher, et fouler le mieux possible des petits morceaux de gutta dure (plaque base de White).

Cette gutta est très bien supportée pendant plusieurs mois, et facilite l'évolution en position normale.

On évitera ainsi beaucoup d'extractions et d'accidents.

H. S. HARGREAVES, *Jour. Am. Dent. Club of Paris.*

Pour l'ajustage parfait d'un inlay au bord gingival.

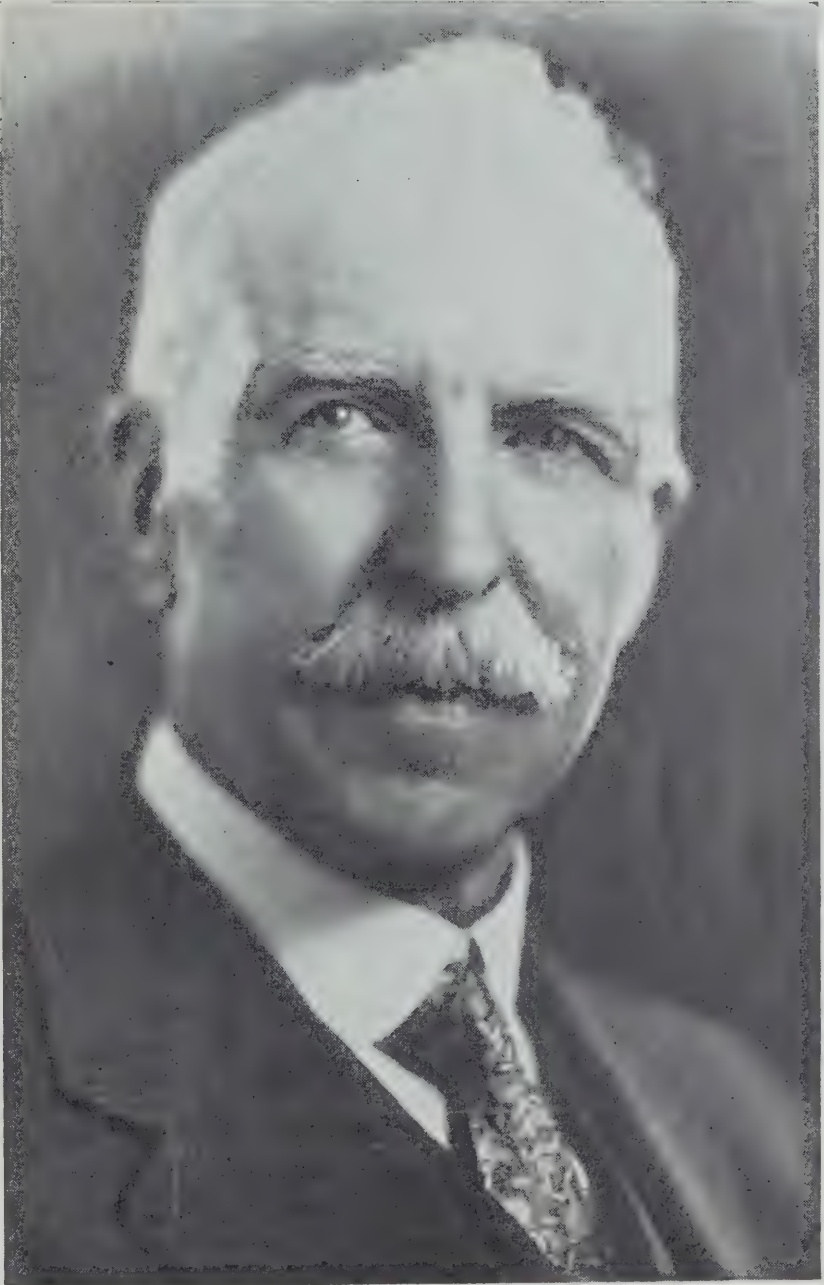
Avant de cimenter un inlay dans une cavité composée, garnir le bord gingival d'un morceau de feuille d'or à aurifier. Celle-ci se trouve écrasée lors du cimentage et l'excès en est facilement bruni, tout en assurant une adaptation parfaite.

JERRY C. ADAMS, *Journal Am. Dent. Ass.*, avril 1938.

Polissage des inlays.

Pour éviter de détériorer les bords d'un inlay au cours du polissage, faire une boulette de plâtre assez dure, et y enfoncer l'inlay, de façon à ne laisser à découvert que les faces externes. On pourra limer, meuler et polir sans inconvénient, aussi bien pour les bords de l'inlay que pour les doigts de l'opérateur.

J. SOMMER, *Journal Am. Dent. Ass.*, avril 1938.



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Died March 27



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Interpretation, Prophylaxis and Therapy of Certain Acquired Defects of the Hard Dental Structures*

by HAROLD K. BOX, D.D.S., Ph.D., Toronto, Ontario

A. NOMENCLATURE

IT must be pointed out at the beginning that the aetiology of certain acquired defects of the hard tooth substances is by no means fully established. Nevertheless, there appears to be a distinct need at the present time for uniformity in the usage of the few and simple terms now employed to designate these lesions. Confusion is bound to exist as long as there is a variation of meaning of any term.†

Hirschfeld¹ in his noteworthy studies of acquired abnormalities of the tooth surface has focused attention on the definitions of Miller and the value of the deductions of this famous dental investigator.

According to Miller's definition, the term "*wasting*" is used in a collective sense to designate any kind of slow and gradual loss of tooth-substance, characterized by a smooth, polished surface, without reference to the cause of such loss."

Miller also defined *erosion* as "the

superficial chemical disintegration of tooth-substance"; and *abrasion* as "a slow and gradual wasting away of tooth tissue by friction." When the abrasion is caused by the friction of the tooth surfaces in mastication, Miller designated this condition *attrition*.

This investigator has further stated: "In other words, wasting produced by mechanical agents is equivalent to 'abrasion'; by chemical agents, to 'erosion'; by mechanical and chemical agents combined, to 'chemico-abrasion'."

B. PERTINENT CHARACTERISTICS OF THE TISSUES INVOLVED

(a) Enamel is much harder than cementum or dentine.

Hodge and McKay² made numerous determinations of the hardness of enamel, dentine and cementum, employing a special instrument known as a micro-character. According to their investigations, the outer enamel was found to be approximately 22 times harder than the

* Presented at the Annual Winter Clinic of the Academy of Dentistry, Toronto, December, 1940.

† For example, the term "erosion" has been used to mean (a) congenital defects of the enamel; (b) notch-like depressions at the amelo-cemental junction in exposed necks of the teeth; (c) highly polished circumscribed concavities in enamel and dentine in regions free from attrition; and (d) enamel decalcification.

cementum, 14 times harder than the dentine, and twice as hard as the underlying middle enamel.

Thewlis³, working at the National Physical Laboratory of London, England, has recently demonstrated a radiographically dense coating of enamel over the outer surface. It is significant to note that in 1905, Miller⁴ pointed out that the external enamel surface "seems to be protected by a thin layer or crust, which offers a marked resistance to the action of acids in comparison with the deeper layers."

(b) Enamel is sparse in organic matter in comparison with cementum or dentine.

It would appear to be generally understood that there is from 3 to 5 per cent. of organic substances in enamel. According to the analyses of Von Bibra⁵, the ratio of organic to inorganic content in the three tissues, enamel, dentine and cementum is as follows:

<i>Organic</i>	<i>Inorganic</i>
Enamel 3.59 per cent.	96.41 per cent.
Dentine 28.01 per cent.	71.99 per cent.
Cementum 32.34 per cent.	67.76 per cent.

It is probable that this finding in enamel does not represent the actual organic content of the enamel proper when certain factors such as adherent dentine, cementum, and secondary enamel cuticle, and penetrating lamellae are taken into consideration. However, from the foregoing figures, it is shown that cementum and dentine are much richer in organic material than the enamel.

It should be pointed out that in the development of enamel, the final product of the ameloblasts is an organic membrane about one micron in thickness, and which as a rule becomes calcified. This is known as the primary enamel cuticle of Gottlieb and should not be confused with the outer or secondary enamel cuticle which is a keratinous layer. Orban⁶ has stated that the primary enamel cuticle "is no more resistant to acids and alkalis than

the organic matrix of enamel or the enamel itself." Maximow and Bloom⁷ consider it to some degree more resistant to acid than the remaining enamel because of a lower calcium content.

It is readily seen that exposed cementum at the neck of the tooth, because of its relative softness as compared to enamel, is more liable to wasting from abrasive action. The dentine also is more prone to wear away gradually through frictional agencies.

On the other hand, enamel is more liable to acid attack than cementum or dentine. Following some superficial decalcification, such enamel is obviously less resistant to the action of abrasive agents.

According to Miller, "wasting of the dentine is not accelerated by the action of acid," and he has further stated that "it may even be retarded or prevented altogether." This is apparently due to the high organic content of dentine, and it is evident that it should be true of cementum also.

It must be pointed out that the role of agents capable of destroying organic material would seem to be highly important in relation to cementum and dentine. Miller has stated: "Substances that attack the organic constituents of the teeth (heat, hydrogen dioxide, strong alkalis) make the teeth more friable, and consequently more liable to wear by friction."

C. PROCESSES THAT CAN PRODUCE A TRUE WASTING, I.E., A DEFECT THAT PRESENTS A HIGHLY POLISHED SURFACE.

(a) Abrasion or friction, i.e., the operation of mechanical factors e.g. as noted in the wearing action of the toothbrush and dentifrice; artificial dentures, clasps, etc.

(b) Chemico-abrasion, in which the mechanical action keeps pace with the

chemical process of disintegration or decalcification.

Decalcification when operating alone tends first to make the enamel surface etched, and later chalky-looking when dried, and easily crumbled. In consequence it does not by itself produce a wasting. On this basis, erosion, according to the definition of Miller, is never a true wasting.

D. CLASSIFICATION OF MAIN DEFECTS.

(a) Those that originate, as a rule, in the cementum where this tissue is exposed at the neck of the tooth. They are commonly known as wedge-shaped defects, and in the later stages resemble a notch made by a file. They begin as minute indentations which soon involve the dentine, and, in general, are sharply defined. They are frequently sensitive to the touch and the surface is almost invariably smooth and highly polished.

(b) Those that have their origin on the enamel surface. They range from flattened or concave areas that affect almost the whole enamel surface to smaller depressions of variegated forms, e.g. grooves, saucer-shaped concavities, and those with a heart-shaped or oval outline. The base is usually glossy, and frequently pigmented, the discoloration effects ranging from light yellow to dark brown or black. The defect is seldom solitary although this may occur. Extension of the condition to the neighbouring teeth is usually to be noted. The intensity of the lesion is most marked as a rule on the tooth first involved, and is gradually lessened on the teeth later attacked.

(c) Defects on the enamel surface that usually begin as regions of decreased translucency, with some loss of lustre. They appear whitish especially when dried, and when loss of surface continuity has taken place, they feel slightly

rough to the touch of an explorer. Later, certain defects present definite areas with a marked whitened appearance, and the affected enamel is found to be easily pulverized. In the case of caries on smooth surfaces, the early whitened appearance of the lesion becomes modified, due to discoloration from certain pigmentation changes. The shades may range from ashy gray to dark brown. These changes are apparently related to the rate of progression of the lesion.

E. INTERPRETATION OF THESE DEFECTS.

From the foregoing, these defects may be explained as follows:

(a) The wedge-shaped defects because of their inception in the cervical cementum and dentine, and the smooth and lustrous quality of their surfaces, are produced largely through abrasion. The commonest cause is horizontal tooth-brushing with coarse pastes and powders.* The manifest lesion, in the opinion of the writer, may in certain instances, be preceded by changes in the organic content of the tissues produced by alkalis, e.g. strongly alkaline dentifrices or other substances. It is possible that other processes may be concerned and which take place in an alkaline reaction, e.g. the action of proteolytic enzymes of certain oral bacteria⁸.

(b) The polished flattened areas and irregular concavities of the enamel are caused by abrasion and chemico-abrasion. According to the viewpoint of Hirschfeld, mechanical abrasion is the most important aetiological factor in the production of the majority of wastings on the buccal surfaces of the teeth. In his opinion, the toothbrush is the "predominating mechanical factor." This is in general agreement with the conclusions of Miller.

The importance of the mechanical action is also exhibited in chemico-abrasion

* For an admirable discussion of the subject see Hirschfeld: *The Toothbrush—Its Use and Abuse*, Dental Items of Interest Publishing Co., Brooklyn, New York, 1939.

where, as pointed out previously, a certain relationship must be preserved between the frictional and chemical processes. However, as Miller⁹ has pointed out, "chemico-abrasion differs from abrasion in its greater tendency to attack the enamel of the teeth." It is readily seen that when the enamel surface has undergone some decalcification, it is much more liable to the action of abrasive agents.

These lesions occur most frequently on the labial and buccal surfaces of the enamel and are often confined to the anterior teeth. The upper teeth appear to be more frequently attacked than the lower (Marshall)¹⁰. Because of their predilection for these localities, it seems evident from the findings that, in some instances, acid secretions from the labial and buccal glands play a part as a causal factor. Many cases of enamel wasting on the labial surface of the upper incisors have been observed by the writer, in which the saliva in the upper labial region of the oral vestibule showed a more acid reaction than at the parotid duct openings or in the lower labial region.

It is also possible that parotid saliva, acid in reaction, and under favourable conditions, may be related to the process. In approximate pH determinations made by the writer¹¹, of 200 different parotid salivas, 89 per cent. showed an acid reaction. In the same 100 individuals, of the 200 submaxillary salivas tested, 37 per cent. were acid. Of the 200 sublingual salivas tested, 43.5 per cent. showed an acid reaction.

Cases of a more generalized type of chemico-abrasion are to be observed in which the masticating surfaces of the bicuspid and molar teeth, and various lingual surfaces are involved. The writer has seen this condition where the parotid and mandibular salivas proved to be neutral in reaction. Further investigation revealed an intensive use of acid fruit

juices, (lemon in particular), and a low intake of fats in the diet.

It is probable that in some instances of chemico-abrasion, the first phase concerns the lack, either through basic sparsity or removal, of certain protective substances on the tooth surface¹². It would be of interest, therefore, to ascertain the incidence of labial and buccal wasting where the prevailing reaction of the resting parotid saliva and secretions of the labial and buccal glands is alkaline, and the diet is high in fats. If it is found that under these conditions the incidence is lower than under the opposite circumstances, viz: acid reaction and a diet low in fats, it would seem obvious that a second factor, as well as simple abrasion, is operative.

(c) The whitened areas on smooth enamel surfaces, and which are more or less rough to the touch in the later stages are decalcifications. They are produced through acid processes, including dental caries. These defects may be looked upon as true erosions. That is to say, there may be so-called chemical erosions and early caries erosions.

Hirschfeld, in describing the process of wasting, has stated: "Indeed, the close interaction between chemical and mechanical forces involved in wasting formation is, in many cases, quite evident to the close observer, and it is not difficult for him to conceive that the character of the resultant clinical picture is dependent on the chemico-mechanical equation of the contributing etiologic factors." He has further stated: "When chemical action is the only factor, the result is an erosion which lacks all semblance to a wasting—the enamel surface may for a time retain its original contour, but the texture becomes white, chalky, less dense and eventually carious." This investigator has observed chemical erosion associated with the "intensive localized use of candy."

The investigations of Krasnow and Oblatt¹³ in the problem of salivary cholesterol are of particular interest. The findings would seem to indicate, in individuals susceptible to caries and erosion, a well-defined tendency to an increase in the amount of cholesterol in the saliva especially when acid in reaction.

F. SUGGESTIONS AS TO PROPHYLAXIS AND THERAPY.

(a) Cervical Defects (Wedge-shaped.)

As the cementum at the neck of the tooth is relatively very thin, (150 to 250 microns), when exposed through the processes of eruption or recession, its removal is a comparatively simple matter under certain conditions. Vigorous horizontal (across) brushing should be strictly avoided. The dentifrice employed should not contain too hard abrasives, and it would seem reasonable that its reaction should be approximately neutral. Strongly alkaline dentifrices should not be employed, and strongly alkaline materials that lie against the cementum should be used with discretion.

(b) Enamel Surface Wastings.

It is essential in the prevention of these lesions to instruct the patient in a proper method of toothbrushing. The dentifrice should not be too abrasive or excessively acid in reaction.

The use of highly abrasive materials by the dentist in cleansing and polishing, is of course, as a rule contraindicated. The oft-repeated employment of fairly abrasive materials, as in the so-called periodical 'prophylaxis' by the dentist also exposes the cortical enamel to the danger of surface loss. This possibility would seem to be increased in the hand use of wood points in the porte-polisher, with these mixtures. The primary establishment of a very smooth enamel surface with suitable polishing mixtures, and its maintenance through the use of fine mixtures from time to time would seem to be

greatly preferred to the repeated use of fairly abrasive agents. It might be well, in this relation, to recall the following statement of Miller: "Whenever the crust, which is only a fraction of a millimeter thick, is mechanically removed, the acid at once acts far more rapidly upon the enamel than otherwise."

The patient should be warned against the inordinate use of citrus fruit juices, and candy, and informed of the danger of using highly acid drugs. Exposure of the enamel to acid vapours may predispose this tissue to wasting.

The dentist should be familiar with some fairly simple method of making an approximate pH determination of the saliva, and the secretions of the labial and buccal glands. At the present time, the reaction of these secretions cannot be changed by any therapeutic method known to the writer.

Where incipient chemico-abrasions are present on the enamel surface, a protective solution is recommended. The following is the prescription:

R Sodium oleate (neutral)	℥iiss (ounces)
Glycerine	℥ iv (ounces)
Rectified spirit.....	℥ vi (ounces)
Hot water.....	℥ vi (ounces)
Oil of peppermint.....	Mxx (minims)
Oil of wintergreen.....	Mxx (minims)
Oil of cloves.....	Mx (minims)
Ess. vanilla.....	℥ ss (ounce)
Sol. carmine.....	q.s.

M.

Sig: 6 to 10 drops on a wet brush to be used as a dentifrice on retiring.

This solution is detergent, and lacks abrasives, and is adsorbed on the tooth surface as a film of sodium oleate. It apparently then undergoes dissociation and leaves on the tooth surface a film of oleic acid. It has been demonstrated in our laboratory that a film of oleic acid on the enamel surface will protect it against acid attack for several days¹⁴.

(c) Decalcifications and Cervical Caries.

Hirschfeld has observed chemical erosion associated with the frequent holding,

during the day, of a hard candy between the cheek and the teeth. This has also been seen by the writer. According to the investigations of West and Judy¹⁵, the repeated use of acidified candy, which is allowed to dissolve slowly against the tooth surfaces, is liable to produce serious decalcification. Marked chemical erosions are occasionally observed where the teeth have been exposed to the action of strongly acid medicines.

When the surface continuity of the enamel has not been broken, or where the surface is only slightly roughened, i.e., where the decalcifications are still in the early stage, Andresen's remineralization powder may be tried. The formula is as follows:

Tartaric acid.....	448	grams
Solution of gelatine, 10%.....	50	"
M. and ad.		
Precipitated phosphate of calcium		
Precipitated carbonate of calcium		
Basic carbonate of magnesium aa.....	160	"
M. sic. and ad.		
Bicarbonate of sodium.....	560	"
Chloride of sodium.....	160	"
Corrigents of taste, ad libitum		
M., sic.		

White, effervescing, mineralizing anti-carieticum. One-tenth of the above quantity is sufficient for the use of a single person for three months.¹⁶

About one gram of the powder is placed on the tongue and thoroughly mixed with the saliva. This is then thoroughly flushed throughout the mouth and the excess only should be expectorated. It is recommended to be used at night before retiring, and following the regular cleansing of the teeth.

The writer has used in practice, in cases of early decalcification of the enamel, including cervical caries in the "white spot" stage, a product known as Enzodent (Squibb)¹⁷. In a few cases following the daily use of this material for several months, a remineralization effect was observed, the areas of decalcification being changed from a dull white appearance to one of a more natural translucency. Evidence is lacking at the

present time as to the factors involved in this transformation.

A tried and proved method, apparently the most effective means yet discovered of arresting surface caries in the early stages, is the procedure advocated by Prime¹⁸ of Nebraska. The method consists of drying the etched surfaces, applying Howe's ammoniacal silver nitrate and reducing it with eugenol. Through its application, decalcification is disclosed in its very early phases, and in this stage the caries process is usually checked without further treatment at this time. Where the patient is highly susceptible to caries, the procedure should be repeated at intervals. When the method is properly carried out, a black residue is deposited in the superficial interprismatic spaces. For a more complete description of the technique and its further uses, the reader is referred to the various published articles on the subject.

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Acrylic Resins

by E. E. BRUCE, D.D.S., Kincardine, Ontario

IN THE January, 1941, issue of the *Journal of the Canadian Dental Association* there is a splendid article by Dr. Felix French on Acrylic Resins as a Denture Base. It contains considerable information on the material, enumerating the fine points and also the faulty ones.

As one who has been using these resins since they were presented to us for dental use, I have found all the faults there are and the checking has been the most disappointing factor. Unfortunately, we have had no standard literature on the handling of this material and salesmen have given us our instructions, which have not been factors leading to success.

When the blanks were given to us and we used Diesel engine oil, the pressure was intense on the teeth encased in stone in the flask, yet a broken tooth was practically unknown, in our hands, when using this technique. Now we have the powder and liquid and we have found from one to five teeth broken in a single case. We struggled to overcome this and have succeeded very well.

As we all remember when using blanks we were taught to roll wax to form gateways by which excess material could escape. With the powder and liquid we hear nothing of gateways and are told to have an excess of material and give it the works when pressing the flask halves

together. We have learned to use smaller gateways than we used with blanks, and also to have patience by waiting for the powder and liquid to form a sticky mass. We wait about twelve minutes, and a shorter time than that causes a creaking sound when the flask is pressed, and the latter always shows a broken tooth. Plenty of spatulation is necessary when the mix is made, and it must then be covered to avoid exposure to the air.

Lastly, to avoid the buckling of celulofoil, which causes a depression on the denture, discard its use, and in its place paint waterglass, which is used mainly to coat the shells of eggs for preserving them, over the model and in fact over all exposed surfaces in both halves of the flask. Allow this to set for a few minutes and there will be smooth surfaces on the denture after processing. A word of caution should be given and that is not to allow the waterglass to get onto the teeth necks or the pins. We boil the case for an hour and do not use the vulcanizer in these cases and find colour uniform. To facilitate unpacking use strips of metal leading from the edge of the cast to the inside edge of the flask and a couple in the other half when pouring. Many of the acrylic resins do not need tin foiling at all when using this technique. In fact, we use only the resins which do not need the foil.

Case History

by JOHN W. CLAY, D.D.S., Calgary, Alberta

HISTORY

Miss A. aged 33 years presented herself for extraction of a lower right third molar on November 16, 1940. She complained of recurring sore throat with enlargement of the submaxillary glands on the right side, coincident with and following tenderness and swelling of the tissues surrounding the tooth. This condition had recurred at intervals for more than a year. The patient reported a poor condition of health and frequent colds during this time, but no specific illnesses.

EXAMINATION

The lower right third molar was slightly impacted, about one third of the crown exposed from the gum flap, which showed symptoms of inflammation. There was a moderate degree of swelling in the right submaxillary area, with slight tenderness. The condition of the supporting dental tissues of the mouth was good, with the exception of the lower right molar area. The general health of the patient was about as usual. The patient and her physician suggested that the third molar might be the cause of the recurrent throat conditions.

TREATMENT

Extraction was delayed for one week and local treatment commenced. 5% iodine was used, and nitric acid followed at once by sodium bicarbonate was placed under the flap. Other treatments followed and by November 23, the gland was not palpable and the tissues around the tooth appeared nearly normal. The patient's temperature was normal. On

that day the tooth was extracted without difficulty and a one grain tablet of sulfanilimide was placed in the socket.

The patient failed to report the following day but returned on November 25 in the afternoon. There was a considerable swelling in the submaxillary region and a temperature of 100.4. Treatment in bed with hot fomentations, mouth washes etc. was instituted at once, but the condition grew rapidly worse. By midnight the temperature was 102.4, and the swelling had increased in size and hardness and had spread to the left side of the face. Her physician was called and hospitalization decided on.

Sulphathiazol was administered and a culture showed streptococcus haemolyticus. Temperature was 102 to 103 and respiration elevated. Both temperature and respiration fluctuated noticeably at intervals.

On November 27, the patient seemed slightly better with a temperature of 100 and pulse 101. In the night the condition became rapidly worse and some accumulation of pus was observed in the submental area. The following morning the patient was moved to the operating room, a small amount of ethyl chloride was administered and an incision was made in the median line below the symphysis. About a half ounce of pus exuded at once, the patient became suddenly cyanotic, and respiration ceased.

AUTOPSY

The autopsy showed edema of the larynx, the lungs and the liver, indicating the virulence of the infection, and also the lack of resistance of the patient.

COMMENT

Whether to extract the lower third molar, or to delay is often a difficult problem. Certainly a danger sign to be heeded is an infection of the submaxillary area. A temperature above normal is also a warning, and the writer feels that the two together should be taken as seriously as a wig-wag on a railway crossing.

One may race over the crossing, or extract the tooth with no bad results, but the danger is there. Even when due and proper precautions are taken as in the case under review, the results may still be unfortunate. Nevertheless dentists as well as physicians may not shirk the responsibility of the risk which sometimes is a part of an operation. The best judgment having been used, without hesitation, the work should be proceeded with.

Your Children's Teeth*

THE *Kronprinz Wilhelm* was a famous commerce raider during the last war. For 255 days this German cruiser roamed the seas, subsisting upon supplies taken from French and British merchantmen on the high seas before she sank them. She touched no port during the time. On April 11, 1915, she dashed into Newport News, Virginia, a veritable floating hospital.

Here was a crew of 500 men living in the open air, eating the staple articles of food, fresh meats, their refrigerators were full, all the fat and cheese they could eat, boiled potatoes, canned vegetables, condensed milk, sugar, white bread and all the tea and coffee they could drink. This constituted their diet.

If German sailors eat typical Canadian meals for 255 days and develop a condition of malnutrition and acidosis, that resulted so disastrously, why do not we Canadians develop the same conditions?

Canadians do develop the same conditions, but because we eat some other off-setting foods which were outside the reach of the German sailors, the severity of the condition is modified accordingly.

The remarkable part of the episode is that none of the officers of this German cruiser was affected; all available fresh vegetables and fruits were served at the officers' table.

Thousands of children in this country are suffering from conditions similar to those which affected the German sailors. There are many others whose dental structures are breaking down, due partly, we think, to careless and thoughtless dietary habits. We, of the dental profession, feel that with the dental destruction and disease that we see on all sides, we should warn our fellow citizens against highly refined foods, which have been robbed of their important essentials.

Highly civilized people do destroy a great deal of the protective element which nature puts in foods. Sugar cane appears to have no ill effect on teeth but the highly refined sugar that we in Canada consume in such abundance is apparently quite harmful to some people. Honey is a natural sugar and seems to have some protective properties. You have read in the daily press how scientists are endeavouring to put back into flour and

* Radio script used in an address on March 14, 1941, presented over the C.B.C. network, and prepared by the Public Dental Health Committee of the Canadian Dental Association. A. E. Higgins, Toronto, Ont., chairman.

bread some of the protection that we destroyed in the milling process.

The cooking of food often destroys some of the vitamin content. An old Irishman once told me that the best fed mouth on the American continent was the kitchen sink. You know he is just about right. So many times we boil the very best part of our food into the water and pour it down the sink. But there I must remember I am not a cook.

Dr. Waugh of Columbia University recently told the Canadian Oral Prophylactic Association in Toronto of his research work among the Eskimos. He told us how a little Eskimo boy had cavities develop in his teeth six weeks after he had come in contact with white man's food. This child, taken from his natural life to live in the Missionary's home, thought candies were very nice. This unaccustomed food caused the decay.

The teeth of a puppy dog can be made irregular and poorly formed and his legs made to grow crooked by withholding some food elements from his diet. On the other hand a puppy properly fed will develop fine, strong, regular teeth and sturdy, straight legs. Nutritionists are trained to know what things are in various foods and what foods the body needs. It is generally agreed that our daily diet should contain:

1 pint of milk, 1 serving of meat or fish, 1 egg, 2 large servings of vegetables or fruits, preferably raw and preferably Canadian in origin, liberal quantities of whole-wheat bread and whatever else you need to satisfy your appetite.

Yes, nutritionists and dentists are thinking now that what we eat has much to do with our teeth.

The Director of Public Health Nursing in one province in Canada says this: "The condition of the teeth remains the one glaring defect found in practically every

school. This shows a lack of proper diet on the part of expectant mothers, improper feeding of infants and a need for more milk consumption, better balanced meals and for remedial dental service for growing children. A trained nutritionist to give expert advice and instruction in the schools would be a boon in the promotion of better nutrition."

About 230,000 children are born every year in Canada. These children enter school at about five years of age. In one large city when school opened in the fall, 6 out of every 10 children in elementary schools had dental defects. The most recent report shows the percentage of children of all ages who have cavities is 95.8. Of 260 little children five years of age 87% have cavities and the average number of cavities is 5 per child. Before starting school your child should have a thorough check up. It is important to take good care of the child's first teeth for they serve him for 1/5 of his life. The foundation for health laid down during the early or formative years of a child's life means so much to his future well-being.

From birth to 12 years of age the deciduous teeth serve us, during a period of amazing growth and development. These teeth lay a foundation for the future. Upon them depends, to a large extent, the appearance of the adult face. Good teeth are essential to good health. During these years we build the body that must serve us throughout life. The amount of discomfort and the amount of money we may have to spend for dental and general health later is governed considerably by the teeth we possess in this formative period.

Children used to have growing pains. Thirty years ago it was quite common. Growing pains are a thing of the past for now we know that no healthy living thing ever had a pain from normal growth. We used to hear people say, yes

sometimes dentists said, "Oh they are only baby teeth, they don't matter." But growing pains were often caused from infected baby teeth. We certainly know today how important the first teeth really are. Every dentist has a big responsibility not to miss any opportunity of preserving these teeth for the period of usefulness which nature intended.

Every child trustingly depends on its parents. Children don't blame their parents for difficulties, trouble, or expense which later on in life happens their way, if they know the general level of knowledge during their childhood days leaves any excuse. So many times I have heard adults say "My parents didn't pay much attention to my teeth when I was a child. I can't blame them for my present conditions though, for they didn't know any better."

When the maintenance of mouth health begins at two to three years of age the dentist has a much better chance to operate without discomfort. Though 31% of two year olds have cavities they are fortunately small. Cavities that are detected early can be handled so much more easily that delay is inexcusable. The dentist has a chance to build and preserve children's confidence. Many children today know the dentist is their friend and their experiences are not what they used to be. Truly dentistry has progressed a long way in the past few years.

Once when I was a small boy I was attacked by a big white rooster. The experience terrified me and as a result even today, a feathered thing flapping its wings gives me an uncomfortable feeling. Now in just the same way, those of us, who, because of neglected teeth, have experienced painful sensations in the past, will have a deep-seated reluctance to face further similar experiences. In other words even though we know that scientific advance in dentistry has made life less fearful we find it difficult to control

our natural hesitancy. Parents who allow a child to suffer because of their neglect are not acting in the best interests of the child. Life can be so different with the help of wise parents.

Dentists are often asked the question "What is a good toothpaste?" Well informed dentists today do not say "Oh any of the popular dentifrices on the market are good." Research workers believe now that mouth conditions vary and that our cleansing methods should vary accordingly. The mouth with abundant deposits of tartar should be treated differently than the mouth with recurring cavities. The mouth affected with pyorrhea should have a different method and cleansing material than the mouth that has a great many of those gum line cavities in the teeth. Your dentist is the one responsible for your mouth health so without elaborating further I suggest you ask your dentist. Besides the right shape and size of toothbrush we should not forget that celery, apples and raw carrots are among those foods that help a great deal to give our teeth a natural cleansing. Proper habits of mouth cleanliness can be taught at an early age and once formed are not so easily broken.

Habits that seem harmless or in most cases are entirely unnoticed often do considerable damage unless we watch carefully for them. Next week I shall talk more about habits. Certain habits and irregularities of the teeth are sometimes easy for anyone to see. Sometimes only the expert can detect a condition that spells trouble. Certainly during those first dozen years of life the position of the teeth in each jaw should be checked regularly. Gum and bone conditions are highly important, for little things can happen that have a habit of growing worse.

For instance—a six-year-old girl at the time of the last Canadian National Exhibition at Toronto developed a very

serious case of trench mouth. Children have a habit of putting things in their mouths you know. This disease is caused by a virulent germ which can be very easily passed from one person to another under certain conditions. The gums become red, inflamed, swollen and full of pus. The teeth sometimes become quite loose. In bad cases the patient is really sick with a fever. Trench mouth becomes almost epidemic at times. It should be treated as soon as possible and by a competent dentist in order to effect a more rapid, efficient cure and to avoid more serious complications.

Little things become major difficulties often because we don't see them in time. Sometimes a part of a root tip of a deciduous tooth may become detached and remain hidden in the bone for years. Impacted teeth, missing teeth, supernumerary or extra teeth and cysts are impossible to see without x-rays. Cavities between the back teeth are often just as impossible to see as if they were hidden in the bone unless x-rays are used. Sometimes cavities become so deep without the patient or the dentist knowing about it that the teeth affected have to be lost or removed too soon. Where it is possible every aid that we have available should be used. It is really cheaper in the long run.

Truly "a stitch in time saves nine" and many parents have neglected some little thing that has later meant more

than they expected. Small cavities in the teeth, minor gum infections, trivial habits, and irregularities of the teeth that at first go unnoticed rank as major calamities to the child who carries through life the mark which that neglect sometimes leaves. An ounce of prevention is worth a pound of cure might well be the motto of the parents and dentists who agree to closely inspect at regular intervals the mouth picture of those children who depend on them.

A child specialist in the United States uses what he calls the contract system. That is for a very small sum monthly he becomes entirely responsible for the dental health of his patient. Up to twelve years of age he carries through the best preventive dentistry that up to date practice allows for all children whose parents approve of this contract. The child must come regularly to the dental office when recalled by the nurse. In that period of time dental costs are lower and the parents are relieved of responsibility to a large extent. Who gets the greatest benefit from this service you may easily guess.

There are dentists in Canada too who have realized the value to the children of such a plan; dental health insurance if you like to call it that.

Good food, good habits, good hygiene and regular supervision mean good teeth, good health, good appearance and low cost.

I know of no more contemptible expression in the English language than the words "to get even." I can understand a healthy anger, and I can fully sympathize with a perfectly normal desire to go forth and give a sound beating to a fellow who has done you a mean trick. I am familiar with most of the lower impulses to which human flesh and blood are at times subject, and which are apt to manifest themselves in very unpleasant ways. But if I were to classify the whole register of sins (big sins and little sins and fifty-fifty sins) I would place, way at the top of the list, that pollution of the soul which manifests itself in the wish "to get even."—Hendrik Willem van Loon in "Our Battle."

Crooked Teeth*

WHO would ever think that a tiny baby had 44 teeth in the mouth when it was born? You don't see any teeth in the new born baby's little mouth, but just the same they are there. It is a wonder there are not more crooked teeth with so many packed into such a small space. If you had x-ray eyes you could see them. Forty-four teeth in various stages of development, some just the tiniest tooth buds, others that have already a covering of hard enamel.

Twenty of those teeth down below the gum belong to the first set, and you probably won't see any sign of their presence till the baby is about 6 months old. Twenty-four of them, still hidden in the soft jaw bone, will be part of the second set of teeth. You don't see any of them until about 6 years of age.

Old mother nature is usually pretty good to us and is preparing wisely for the future. If we help just a little those soft bones will grow bigger and stronger until there is room for even more teeth. Most adults grow 32 teeth in the second set. Every parent wonders sometime if there is going to be enough room for all the teeth, or whether they are going to come in crooked. That depends quite a lot on what forces are exerted on the growing bones. Suppose you had twenty marbles arranged in two semi-circles on a floor rug. Each marble represents a baby tooth. It does not take much force to move those marbles out of position does it? Just the same way those teeth, that you thought at first were so cute in baby's mouth, require only a little constant pressure to change their positions.

Long continued pressure on any part of the face sometimes tends to move the teeth out of their proper positions. Pressure can mould bones into different shapes sometimes without us being aware of it. You have seen boys and girls, sleeping with a hand or arm under the face. You have noticed children, lying on their stomachs on the floor reading with both hands holding up the chin. Often when they are studying or reading they have a habit of resting the face on the hand with an elbow on the desk. Pressure is exerted for long periods of time quite unconsciously and a bad habit is formed.

If you notice the habits your child is forming, though they be ever so cute now, remember Andy Gump. I can point to one lovable youngster who slept on his left side with both hands under his face. His father remembers how sweet and angelic he looked in this position. But unfortunately all the baby, or deciduous teeth, in the lower jaw have been pressed so far in that they cannot touch the teeth in the upper jaw. His face is quite lop-sided. Because of this he cannot chew his food very well. All the teeth on the left side are always dirty and have many cavities. Now it will take time and trouble to make the bone holding the second teeth grow over in its proper place.

Sometime when your child is not watching notice if the lips are closed and the breathing is through the nose. When he is interested in something and unaware of your attention you may detect the habit of mouth breathing. This sometimes is the result of some obstruction in

* Radio script used in an address on March 21, 1941, presented over the C.B.C. network, and prepared by the Public Dental Health Committee of the Canadian Dental Association. A. E. Higgins, Toronto, Ont., chairman.

the normal air passages such as enlarged tonsils or adenoids. Mouth breathing is sometimes associated with narrow arches or jaws. Air breathed through the nose is warmed, filtered and humidified. This air conditioning is a lot better for the youngster's lungs. At the same time, if the mouth is closed, the teeth and gums are bathed with saliva. This is much better for the youngster's mouth, including the teeth. There is less liability of starting gum irritations which might lead to pyorrhea. Mouth breathing like thumb sucking is a habit, that once well established, is very hard to correct and sometimes results in a long narrow face, or narrow arches, or protruding teeth. Frequently the child loses the habit as he grows older, but the longer it continues the more dangerous it becomes.

There are other habits too that often cause trouble. Little babies get a big kick out of sucking their thumbs. They do this, we are told, to satisfy an appetite and while they are small it probably causes no harm. But when the habit is prolonged after they are a few years old, then there may be a real cause to worry. This habit may cause somewhat the same result as pressure from thrusting the tongue continually against the teeth. The patient with this latter habit is called a tongue thruster.

When the Eskimo at an early age starts to chew frozen meat and fish thoroughly, he has to grow very heavy bone in the jaws. When he exercises a muscle it grows bigger and stronger. The muscle exercise of chewing makes his lips and cheeks very strong. They press in on all his teeth. At the same time his tongue muscle develops and presses outward on the teeth. The lips and cheeks pressing inward and the tongue pressing outward, the teeth just have to stay in line; those teeth just can't get into a double row for it is like being squeezed between two rollers.

If you help your child to chew his food properly you can, like the Eskimo, help to guide the teeth where they belong. Try to allow sufficient time for your meals and be an example. Children are quick to imitate. The quick lunch habit won't work with tough fibrous foods. It takes time to chew them and they are often the foods that we lack for proper nutrition. It takes a reasonable length of time to eat. How can you expect your child to chew properly, to exercise the muscles, to grow a full support of bone if you gulp your meals and hurry them with theirs. Of course I know that meal problems with children are quite serious in some cases, but wise parents can and do handle them, when they have the will to do so. Chewing on one side of the mouth only is a habit that we often adopt when there is a sore tooth on the other side, or sometimes where, for some reason or another, there is a tooth missing we do that too. If the habit of chewing on one side persists in youth there is a possibility of the muscles and bones on that side developing well, and the unused side showing underdevelopment. Proper mastication has other values too. It is the first step in digestion and prepares the food for entrance to the stomach. There may be other factors working against straight teeth but chewing exercise is highly desirable.

The human mouth is very much like a hinge. The open ends of the hinge are your nose and chin. The joint of the hinge is just in front of the ear. That little bump at the front of the ear, about half way down, is called the tragus. Put the ball of the finger on the skin just in front of the tragus of the ear and press in while you open and close your jaws. Do you feel the hinge joint moving? That is called the head of the condyle and it works in a very wonderful joint. Now when all your teeth are in the mouth in their proper place, the ends of the hinge

just can't close too far. In other words your chin can't get up too close under your nose. When grandma lost all her teeth you remember how close her chin and nose came together. And you can see how your nose and chin won't be the right distance apart if there is any interference with that hinge.

To illustrate this let me tell you about a boy who was at the party age, just starting to go out to young people's parties. He complained that it was embarrassing for him, because he could not bite off a sandwich. His back teeth were very irregular. He had teeth locked deep in the bone underneath other teeth. When he closed his jaws the back teeth touched, but the front ones were open about one quarter of an inch. I don't know which is the worse, to have your nose and chin too close together like grandma, or too far apart like this boy.

It isn't very funny when your dentist tells you that a mouthful of crooked teeth generally has more cavities in the teeth, bad gums and weak bone support. Most people think of appearance only being affected by irregular teeth. They know that the contours and proportion of the face are influenced by the position of the teeth. They know that if we have strong, well formed, well placed teeth that our lips and cheeks and nose and chin will be just about where they belong. We all know that a really winning smile depends a lot on good teeth. Many occupations in life call for good appearance. Many times the vigorous, keen looking, smiling face is chosen. If you have a boy won't you want him to get on well, to get a good job, to make a success of life, to be admired and liked by other people? He does not need to be a Greek Adonis, the God of Beauty, but I'll bet on the good looking, keen, intelligent face every time. If your child is a girl that's a different story. Every girl wants to be beautiful. The movie queens never have

crooked teeth. You know your girl has a better chance and all parents want to do all they can. They say love is blind, but it is a lot easier to be loved when you look nice.

Many of us don't know that crowded teeth are more liable to decay, harder to keep clean and more susceptible to pyorrhea. You don't very often hear of children having pyorrhea. It is really a disease of grown ups and older people. But if you look at a child's mouth and see teeth that are bunched, you might try a little fortune telling; you can be reasonably sure that later on sometime that child will have to fight the disease.

Very few of us realize how teeth may affect our behaviour. When teeth are in their proper places we have one of the finest milling or grinding machines that nature can make. When our food is properly masticated the body is better fed. We look better, we feel better, we should behave better.

If we have teeth or gums that are sore or painful we probably are more irritable, we probably don't behave so well and as an example just think of the fretful cranky baby who they say is cutting a new tooth.

If we have teeth that are likely to affect our health because of diseased conditions then life isn't just what it could be.

And if we have irregular teeth that make us conscious and sensitive about our appearance, afraid to smile and we shrink from social contacts, then what about our behaviour?

I know a boy called Charles. His mother noticed his teeth were becoming crooked. His dentist said the condition should be treated before it got too bad or cost too much. His dad said it didn't matter, that women spent too much on appearance anyway. Charles didn't care much then. In fact he was rather glad nothing was done for he wanted to spend all his spare

time on rugby. He had a good chance to be captain of the team.

But Charles didn't pass that year. He had missed school, been sick, had a lot of colds and didn't feel so full of pep. He had something wrong with his nose, his mouth was always open and he didn't want to get up in the morning. The physician said his tonsils were bad and thought his adenoids should come out and after awhile this was done.

Fortunately this physician knew that habits don't always stop when the cause is removed. He advised Charles' parents to have his teeth fixed and help to keep his mouth closed and breathe through his nose. This he said would mean a lot to his health. A dental specialist, called an orthodontist, was able to help Charles. His crooked teeth were straightened. He could breathe properly again. His old energy returned and his school work improved so much. One day Charles came home all smiles. There had been a lot of smiles lately. You guessed it. He looked at his dad that night and said, "Well dad, I made it. It was tough

there for a while but I am captain now!"

This brings me to the end of my story. What can you do? Look very carefully at your child's face and mouth. Watch out for those habits. See that those teeth are really able to chew and give them the proper foods to chew. Ask your dentist about habits and foods. Most dentists are pretty busy these days with so many of them gone in the army. Your dentist is just like you when you are bothered with your children's questions. But ask him again. Ask him how children should clean their teeth. Ask him to show you just where Mary or John's teeth should touch together.

And last of all just think how much less trouble and money it costs to prevent bad mouth changes than it does to correct them. This depends of course on the parent's wisdom in seeking early and constant attention and in their close co-operation. Don't forget when you talk about or see crooked teeth that very often these conditions can be prevented if you start in time.

Conventions

74TH ANNUAL CONVENTION OF THE ONTARIO DENTAL ASSOCIATION, ROYAL YORK HOTEL, TORONTO, ONTARIO, MAY 19-21, 1941.

Dentists from the United States and from all parts of Canada will be welcome.

WESTERN CANADA DENTAL SOCIETY, EDMONTON, ALBERTA, JUNE 2-4, 1941.

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.

Secretary, A. D. Richardson, 1240 Union Avenue, Montreal.

AMERICAN ACADEMY OF PERIODONTOLOGY, HOUSTON, TEXAS, OCTOBER 23-25, 1941.

AMERICAN DENTAL ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

17TH ANNUAL SESSION OF AMERICAN DENTAL ASSISTANTS ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

General Secretary, Aileen M. Ferguson, 708 Centre Street, Jamaica Plain, Mass.

L'ASSOCIATION DES CHIRURGIENS-DENTISTES DE LANGUE FRANCAISE DE L'AMERIQUE DU NORD—CONGRES DE QUEBEC, LES 5, 6 ET 7 JUIN 1941.

Facing Tomorrow*

WE USED to have a neighbour who lived alone. She was old, she was grouchy and she was ugly. Her regular trend of thought consisted of one topic which she summarized in every two minutes of conversation by saying "This is a world of trouble."

Now there was never any doubt about the fact in anyone's mind but that it was a world of trouble for her. She made it so. She lived in one of the finest houses in the district, she had ample means and her surroundings were the best the neighbourhood had to offer. Her house was situated on the summit of a hill. She had so much to live for, the view was delightful and the sunsets were wonderful but she never saw them. Her mental attitude toward life was reflected in everything around her; as children, we only approached the house under compulsion.

There are men who are attempting to carry on a practice in dentistry who resemble this old woman in many respects. They wonder why they never get the good class of patient or where all the children of the community go to get their dental care. They are "once-a-patient" men.

Down at the village was an old cobbler. His shop was rather ill-kept as I recall, however at the time we never thought it so. He had an old motto, covered with dust, which hung above his bench. "Molasses draws more flies than vinegar." Old Tom had no need of the motto for his welcoming personality was such that

words on the wall were superfluous. Just why he put up with us kids is inexplicable but we forgot errands and were late for meals because of lengthy calls at Old Tom's.

There are those who would teach more psychology, more economics, and more common principles of salesmanship to dental students. It is argued that a graduate may possess unexcelled ability and yet fail because he does not succeed in his contacts with the public.

It may be a bit old fashioned but it is our contention that the general public is looking for the dentist who is sincere, who stands four square behind the work he does, who has the courage of his convictions, believing that dentistry is an all-important health measure and who possesses a reasonably cheerful and enthusiastic attitude toward the task at hand and the patient concerned. On the other hand we are equally convinced that the dental patient does not desire nor will he continue to go to the dentist who does not take his profession seriously, who attempts to put something over with any form of high-pressure palaver, whose greatest asset is the high class furnishings of his office, or who thinks dentistry is just a rather disagreeable way of earning a livelihood.

Any individual who has enough ability to meet the educational standard demanded by Dentistry today should be able to apply to himself these principles.

NEDREW TELLUG.

* This and similar articles appearing over the pen-name of Nedrew Tellug are prepared by a well-known Canadian dentist and are published in the hope that they may be helpful to our readers.—Editor.

Save Our Way to Victory — Buy War Savings Certificates.

Practice Management

"We, The Patients, Speak"

by E. LE VARRE STORING, Sarnia Chapter of the Ontario Dental Nurses' and Assistants' Association.

UNTIL a few months ago I was employed in a dental office and since that time I have had occasion to visit a dentist, not as an employee but as a patient. It occurred to me that you too might be interested in seeing the dental nurse or assistant through the eyes of the patient and to perceive in this way their value to the public.

An appointment had been arranged by telephone and my conversation with the assistant had been most satisfactory, but I still retained a sense of disquiet as I opened the door to the reception room. I had a moment to observe the very well dusted venetian blinds and the clean tailored drapes before I was greeted by a well groomed and charming assistant who called me by name and relieved me of my coat and hat. Although I am sure that I made the girl feel conspicuous, I couldn't help staring at her immaculate uniform and accessories. Immediately I set aside all fear of unclean instruments and equipment, because anyone so obviously neat in herself could not possibly be neglectful of her duties.

At the assistant's request, I waited for a few minutes in an individual chair, and read from a current issue of an interesting magazine.

Within a short time the assistant asked me to come into one of the operating rooms and once again I was aware of her appearance and friendly manner. We talked together while she prepared the tray and provided me with a fresh bib and cup. Our conversation did not in-

clude the weather nor did we speak of dentistry in any phase.

Upon the arrival of the dentist, the assistant introduced me to him and disappeared, leaving me to discuss my dental problems with the doctor. Later the assistant returned to the operating room. She prepared the filling material for my tooth and I noted the capable way in which she arranged the instruments, the matrix band, and other materials necessary for the restoration. It was a pleasure to see my dentist and his assistant working in such complete harmony, and in this congenial atmosphere I easily forgot any fear that I might have had of the dental chair.

After a future appointment had been arranged, I was dismissed by the assistant in the same courteous manner. She helped me with my coat and smilingly reminded me of the time and date of my next visit.

As I walked down the stairs I remembered with pride that I too had been privileged to hold a position such as the girl whom I had just left, and I understood more fully the words of our pledge "I will always be loyal to the welfare of the patients who come under my care."

It is my intention to impress all dental nurses and assistants with the fact that you are a very important part of modern dentistry and though we patients may sometimes fail to show our appreciation, you may be assured that we never think of our dentist without thinking of you.—

Bul. Ont. Dental Nurses' and Assistants' Assoc.

The Forum

• CAN A DENTAL SERVICE PROGRAM BE AN EDUCATIONAL VENTURE?*

C. E. TURNER, A.M., D.Sc., Dr. P.H., Professor
of Biology and Public Health, Massachusetts
Institute of Technology

YOU recall the report which President Coolidge is said to have given to Mrs. Coolidge, with his customary verbosity, concerning a sermon which he had heard. Mrs. Coolidge asked, "What did the preacher talk about?" Answer, "Sin." "What did he say about it?" "He's against it."

If you want a concise report for your school superintendent on this address, tell him the speaker said a school dental service which does not educate, or which educates in the wrong direction, is a sin and he is against it.

May I quote as a textual basis for this discussion a few sentences from the Hoover White House Conference?

"The health program of the schools should be definitely and fundamentally educational in nature and scope."

"While the promotion of health is one of the cardinal objectives of the school program, no service should be performed in such a manner that it takes away fundamental privileges or responsibilities of the home in relation to its children."

"Any policy that does for the individual what he can do for himself leaves him more dependent and less able and willing to care for himself when the protective hand is withdrawn."

"Those health services which are carried on in the community primarily for curative purposes should be admin-

istered and performed by some other agency than the school."

"The school authorities should provide only such professional personnel as can be justified on the basis of a necessary contribution to the educational program."

This philosophy has received national endorsement in the White House Conference and elsewhere. It has been accepted but not always followed.

Let us see just what its implications are and whether we can agree with them.

First, this philosophy implies that the schools shall include educational but not clinical service in the dental field. This educational program will have three major objectives; (1) the proper care of the oral structures, (2) maintenance of a healthful dietary, (3) the securing of adequate dental care.

Education in these directions may be carried out by anyone who knows the facts and knows how to instruct and motivate children at the age level with which he or she is dealing. It may, therefore, be done under the leadership of a dentist or dental hygienist who is thoroughly trained in education. It will be done much better, in the judgment of the speaker, if it is made a part of the general health education program under the leadership of a trained health educator with adequate knowledge not only in this field but in other fields of personal and community health. Most of the health instruction and motivation of children should be in the hands of the classroom teacher in any case. If we had a health education program in which the physician, the dentist, the nurse, the nutritionist, the physical educator and the dental hygienist each supervised a segment of subject matter, we would be in a

*Read at the meeting of the Section for Dentists and Dental Hygienists of the American Association for Physical Education, Health, and Recreation, at Boston, Mass., March 28, 1940.

confused situation indeed.

Does this philosophy exclude the employment of a school dentist by the local school department? He will not be employed to operate a dental clinic, if you agree that "curative services should be performed by some other agency than the school." If you accept the principle that the school should only provide the personnel necessary to the educational program, the school dentist will be employed, if at all, for educational purposes. State departments of health and state departments of education, or both *must* employ public health dentists to promote an adequate dental program. Except for very large cities or in connection with school department dental clinics, local communities will not.

But, you say, we want a school dentist to decide which children need to secure dental service. Not if you believe all children should go to their dentist every year! It is agreed that only a dentist should decide whether dental treatment is needed, but one of the main objectives of our educational program is to teach the child to go to his dentist regularly, now and throughout life. We don't want to employ a school dentist merely to find a few children whom he can tell not to go to their dentist this year. Let all the children be examined by their own dentist or by the clinic dentist.

But, somebody says, then you are proposing not to have any dental service at all. Nothing could be farther from the fact. We are proposing the most complete dental service possible but a dental service which is in the hands of the dental profession in the community,—not a service which is performed in such a manner that "it takes away fundamental privileges or responsibilities of the home" and which makes the child, upon leaving school, "less able and willing to care for himself when the protective hand is with-

drawn." There is real danger that instead of learning that he should secure dental care, the child's experiences may lead him to believe that it is the responsibility of the government to come to him, examine him and furnish any service he may need.

But, you say, the school dentist educates children in dental health as he examines them. To some extent, yes, but is that the most efficient method of instruction and is his employment for that purpose warranted? Some instruction at the dental chair is desirable but it can be rendered by the family dentist and the clinic dentist. Is there any reason why the dentist in private practice will not make an educational contribution to his child patient which will be, by and large, nearly as good as that which would be made by a dentist employed by the school?

With the right health education program dental health will not be neglected. We will have more dental service from dentists in the community and we will have more children ready to continue dental service when they leave school. From the standpoint of the dental profession, more service will be rendered and more will be accomplished, not less.

The type of program proposed involves:

1. A well organized program in general health education emphasizing, in the dental field, the three important objectives mentioned above.

2. A vigorous educational program to get all children from self-supporting families to the family dentist at least once a year. When all dental work is completed, the dentist gives the child a certificate to that effect which is brought back to the school. This certificate is a record of the accomplishment and a motivating force in securing the desired pupil behaviour.

3. Necessary clinical service, outside the school, for needy children.

Such a program involves the work of school nurses or other school personnel in getting needy children to the clinic. It implies a unified dental profession ready to render high quality service and to sign certificates only when the needed work really has been done. Contact between the school and the dental profession must be maintained to establish standards for the dental certificate, to promote mutual understanding and to keep both the school and the profession informed of the progress from year to year.

Through such an educational program it has been possible to increase the number of elementary school children completing dental treatment each year from 30% to 70% of the school population, without increasing the amount of free clinic service.

The number of children having all of their work completed is an excellent measurement of the effectiveness of a dental service program organized upon this basis. This type or any other type of dental program should be further evaluated by the dental survey technique, made by the dental personnel of the State Department of Health or by other competent dentists. Every program needs checking to determine the status of the dental health of the children and the progress which is being made. Our chairman, Dr. Wisan, has made significant contribution in this field, and it seems certain that objective measurements of dental health applicable to groups of children will be further developed.

You may feel that our children would have better dental health if the government provided dental service for all children who wish it. The question of state medicine operated at taxpayer expense under the direction of the party in power is too large a question to discuss here. One thing is certain. Under our present form of government a dental health service can be developed on the

basis described above, which will be part and parcel of an educational program such as the school ought to promote.

To educate the child to go to his dentist is much better than to educate him in the belief that the government owes him dental service. Let us encourage the feeling that he has responsibility for his own health, not the belief that the government will surround him with health workers who will pull him or push him into whatever action he needs to take. There are strong and logical arguments for separating education and prevention from treatment. As Dr. Hydrick says in "Intensive Rural Hygiene Work in Netherlands, India," "whenever it is economically possible, curative medicine and hygiene should be separated, the curative activities being carried out by one personnel and the preventive carried out by personnel trained in hygiene."

The dental service program can be an educational venture. Its primary objective is to educate the child as to the need of dental service, to an appreciation of his dental care, and to a willingness to purchase such dental care just as he provides himself with the other fundamental necessities of life.—*Bulletin of the Nassau County Dental Society, Component of the Dental Society of the State of New York.*

• SALIVA AND ENAMEL DECALCIFICATION V. CLINICAL INTERPRETATION

by J. T. GORE, D.D.S., Philadelphia, Pa.

SUMMARY

THE various clinical forms of enamel decalcification, including pit and fissure, approximal, gingival, mechanical abrasion (brush or attrition), erosion, cracks, increasing friability, penetrating stains and senile caries are probably the result of the chemical composition of the saliva and the chemical and physical changes which take place in the stagnant saliva.—*Jour. of D. Research, Dec., 1940.*

• **CLOSED BITES**

by JOHN V. MERSHON, D.D.S., Sc.D.,
Philadelphia, Pa.

CONFUSION exists in the minds of many dentists regarding the possibilities and limitations of treatment of closed bites. This results from failure to understand the inter-relationship of tissues and to differentiate between different types of closed bites.

In a normal organism tissues are in harmony. Muscle is the dominant tissue. The length of the muscle determines the length of the bone and not the reverse as has been so often erroneously taught. After maturity, the length of a muscle cannot be changed except as the result of accident, disease or surgery.

The mandible is suspended from the skull by ligaments and the muscles of mastication. When these muscles contract, the teeth are brought together but when they relax, there is a slight space between the teeth. This is nature's way of preventing a constant tension on the muscles. Thus we see that there is a certain space which is normal for each person between the masticatory surfaces of his teeth when the masticatory muscles are relaxed. The bite can be *restored* to this normal height of teeth but the height may not exceed that of the original teeth. If it should, the patient will experience discomfort. This varies, according to the temperament of the patient, from a relatively mild irritation to a severe nervous upset. This strain on the muscles is contrary to the well-being of the organism. Absorption of the bones of the mandible and maxilla, in the case of too high dentures, and depressing of the teeth or resorption of their roots, in the case of too high onlays, is nature's method of relieving this strain. Something must change. As muscles are dominant, it must be the other tissues which change.

Efforts to open bites are not confined

to mouths in which wear and loss of teeth have led to the closing of the bite. Closed bites appear in many mouths at certain ages during the active growth period but they usually disappear as development progresses. However, certain closed bites persist after maturity. These are of 2 kinds. The first is the true closed bite. The musculature is heavy, the posteriors short and the distance from the nose to the point of the chin shorter than average. Because of the reflection of this shortness in the face, many men try to open this type of closed bite for aesthetic reasons. It cannot be done because the muscles of mastication are short and will not admit of additional bulk between the jaws. The individual normal is the result of a harmonious interrelation of the tissues. The tissues are in harmony in the true closed bite. Form is correct for that individual; function is normal. In spite of the fact that we may not like the facial contours, we cannot change them and efforts to do so will only damage the person's tissues. Onlays will weaken the periodontal fibers allowing teeth to tip or they may cause resorption of the alveolar process with resultant loss of teeth. Resorption of the roots may also occur. The nervous strain is often as serious as the local, oral damage caused by these misguided bite-opening efforts.

The second condition often referred to as a closed bite is really a deep overbite. In this condition, the muscles of mastication and the posteriors are of average length but there is an exaggeration of the Curve of Spee and an over-eruption of the lower anteriors results in an impairment of function because the lower anteriors bite into the soft tissues behind the upper anteriors. While this does not show in the face, this is not an individual normal variation but a mal-development. It can and should be changed. Treatment of this condition by

depressing the lower anteriors is usually successful especially if undertaken after the cessation of active growth. The change is made in the bone supporting the teeth. There are no muscular attachments to the bone supporting the anteriors. Hence, there is no problem such as is involved in the true closed bite.

The desire to relieve any condition which patients may present too often leads dentists to undertake the impossible. This is especially true in closed bites. We can avoid damage to tissues and disappointment to patients by keeping in mind that a harmonious interrelation of tissues results in the individual normal. While it may not be ideal aesthetically, the individual normal cannot be tampered with without ill effects.

We can do much to improve patients' comfort and appearance when the bite has closed due to wear or loss of teeth but that is restoring the bite, not opening it. We are successful in treating deep overbites by depressing the lower anteriors. But we shall not only meet with failure but we shall do real harm if we persist in trying to open true closed bites.—*Dentistry a Digest of Practice.*

• A CORRELATION BETWEEN PERIODONTAL DISEASE AND CARIES

by SAMUEL CHARLES MILLER, D.D.S., and BENJAMIN B. SEIDLER, A.B., D.D.S., New York University, College of Dentistry, N.Y.

(Summary of paper in *Jour. of D. Research*, Dec., 1940.)

1. 1,003 cases were studied radiographically to determine the existence of a correlation between periodontal disease and caries.

2. Bodecker's modified dental caries

index was used in the computation of the caries experience of a radiographic series.

3. The relative amount of alveoloclasia was used as the index of periodontal disease.

4. There seemed to be an antagonism between the two factors according to sex. Males were found to be more susceptible to periodontal disease and females were found to be more susceptible to caries.

5. Coefficients of correlation were computed on three different groups of cases ranging in age from 31 to 50. It was also computed on the entire series of 1,003 cases. None of the coefficients obtained were of statistical significance.

6. There is no correlation between periodontoclasia and caries.

• GENERAL COMMENT

THE American Association for the Advancement of Science gives the following compilation of money spent by the so-called middle class or low income group, according to the January issue of the *Bulletin of the North Carolina Dental Society*:

1. Food	\$17,000,000,000
2. Clothing	8,000,000,000
3. Auto—New and Used	6,600,000,000
4. Gambling	6,500,000,000
5. Motion Pictures	2,000,000,000
6. Beer	1,730,000,000
7. Tobacco	1,600,000,000
8. Sports and Games	900,000,000
9. Liquor	880,000,000
10. Cosmetics	700,000,000
11. Silk Hosiery	645,000,000
12. Jewelry and Silverware	603,000,000
13. Dog Bills, Upkeep and Veterinarian Fees	601,100,000
14. Radios and Musical Instruments	600,000,000
15. Race Track Gambling	500,000,000
16. Candy and Confectioneries	400,000,000
17. DENTAL SERVICE	400,000,000
18. Coca-Cola	60,000,000
19. Pastes and Mouth Washes	29,500,000

—*North-West Dentistry.*

Our fathers got a great thrill out of making money, building their own houses, providing for their old age and laying something by for their children. Children inherit their father's leavings, not their father's and mother's thrill.—D. H. Lawrence, in *Dental Record.*

Saving You Money

Through the efforts of the Legislative Committee of the Canadian Dental Association, the War-time Price and Trade Board recently reduced from 10% to 6% the levy on most of the dental supplies imported from the United States. As the actual figures are not available, it is difficult to determine exactly what this annual saving means to the dentists of Canada. However, a very conservative estimate places the leviable dental items at \$600,000.00. A 4% annual saving on this amount means a direct saving of many dollars to every Canadian dentist. The annual saving on this item alone would be more than sufficient to provide adequate support for an efficient National Dental Body. A full-time executive officer could undoubtedly bring about other savings on duties and taxes. In addition, an executive officer could study problems of national importance to every practitioner, such as post-war rehabilitation, the state control of dentistry, an annual all-Canadian convention and other topics of national significance.

The Committee on National Dental Progress has been appointed to inform the Canadian dentists upon the necessity for more adequate support of our national organization.

The Committee requests your co-operation by:

1. Writing or wiring your provincial legal body requesting more adequate support.
2. Presenting to your local dental society a resolution (if none has been passed recently) favouring more adequate support.

Canadian dentistry is at the cross-roads. Your action will determine its future course. Act now.

Issued by Committee on National Dental Progress.



PRINCE EDWARD ISLAND



SASKATCHEWAN



Editor — M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

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NOVA SCOTIA



S. G. Ritchie, Halifax

NEW BRUNSWICK



Harry H. Peters, Saint John

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E. M. Laurin, Montreal

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John Clay, Calgary

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



J. S. Bricker, Vancouver

School Dental Service

Throughout Canada a number of dentists are engaged in School Dental Service, either on a full-time or part-time basis. A limited number of others, from time to time, try to secure positions of this character. The great majority of dentists, however, give very little thought to the entire problem, and yet it is a problem deserving of the most careful consideration of organized dentistry everywhere — and in particular the Canadian Dental Association.

In some Canadian centres this school service is well organized, while in others, even in large centres, it is not. In some cases the service is under the control of the Board of Education; in other cases, under the Board of Health; while in some smaller places the matter is left in the hands of some well-meaning Service Club or Women's Organization.

In the City of Toronto the Division of Dental Services of the Department of Public Health has a staff of sixty-six, made up of a director, an orthodontist, seven full-time and twenty-five part-time dental officers with thirty-two dental assistants. There are thirty clinics distributed throughout the Public Schools of the City and six in the Separate Schools. Four of these clinics operate full time and a few only two days a week but the majority are

in operation six half-days per week, (Monday to Thursday in the mornings and all day Friday.) In 1938 there were approximately 100,000 pupils in the elementary grades in the City of Toronto. Of these 85,000 received a dental examination and treatment was given to 50,000.

In Hamilton, Ont., there are four units with two dentists and one assistant attached to each unit. The dentists are on half-time service. In London, Ont., there are seven dentists working part time. Brantford, Ont., has a full-time dentist and nurse. Ottawa, Ont., has one part-time operator. In Oshawa, Ont., there are eleven dentists working one half-day a week for three months of the year. In Montreal, Que., dental equipment is located in four different centres and the dentists conduct half-day clinics. In Vancouver, B.C., there are two dental clinics located in elementary schools, open five days a week. In this city the full and part-time operators are paid on an eleven months' basis with the month of August, two weeks at Christmas and ten days at Easter for vacation. In Winnipeg, Man., there is a Central Clinic in the School Board Offices with one full-time director and four part-time dentists. In Regina, Sask., there is one full-time and one part-time dentist and in Saskatoon, Sask., one full-time dentist. In Edmonton, Alta., there are four half-time operators. In Calgary, Alta., there are five dentists working from one to five days a week or an equivalent to the work of two and a half dentists on full time. In Saint John, N.B., there is one half-time operator who works each week-day morning throughout the year except for three weeks' vacation during the summer. There is one full-time dental officer in Halifax, N.S. In Summerside, P.E.I., there are five dentists participating. The plan is for a dentist to work a half-day or sometimes two half-days a week.

In Toronto most of the men on part time receive \$6.07 for a half-day service (3 hours). At the time of writing (February) five of the staff had joined the Dental Corps and several others were leaving shortly. Their places were being filled temporarily by men receiving \$5.43 per half-day, the positions of the regular staff being kept for them. In London, Ont., the operators receive from \$5.00 to \$6.50 per half-day depending on the length of service. In Ottawa, Ont., \$6.00 is paid. In Oshawa, Ont., \$7.00 is paid but the dentist does the work in his own office and supplies all materials. They have hopes of having this figure raised. In Montreal, Que., \$4.50 is paid. In Vancouver, B.C., \$7.33 is paid. In Winnipeg, Man., \$5.33 is the present rate. In Edmonton, Alta., and Calgary, Alta., about \$6.00 is paid. In Nelson, B.C., a half-time operator receives about \$6.50 and supplies his own nurse. In Saint John, N.B., about \$4.25 is paid. In Summerside, P.E.I., the dentist receives \$7.00, the work being done in his own office and he supplies all materials except anaesthetics.

In London and Ottawa, Ont., the school dental service is under the control of the Board of Education, while in most other centres in Ontario it is under the Department of Health. In Montreal the dental clinics function through the efforts of the Dental Committee of the Junior Red Cross. The latter

organization undertakes the administration of the clinics and funds are provided through the generosity of various clubs and societies in the City. In Winnipeg, Man.; Victoria, B.C.; Edmonton, Alta.; Halifax, N.S.; the clinics are under the direction of the Board of Education. In Vancouver, B.C.; Calgary, Alta.; Regina, Sask.; Saint John, N.B.; the dental service is under the control of the Department of Health.

In most centres in Canada where dental service is being rendered to school children some effort is being made to have the service limited to those children coming from homes where the average income per member is below a certain figure which figure varies in different parts of the country. In Regina, Sask., and in Calgary, Alta., the service is not so restricted and any child in certain grades may apply for this free service.

The above survey is given just as a cross section of what arrangements have been made to care for the school children of Canada and does not in any way represent a complete statement of existing conditions. That there is no uniform procedure is a self-evident fact and that something should be done about it is also definitely clear.

In some smaller places a philanthropic organization will decide to donate an indifferent equipment and pay for the upkeep of a dental clinic if the dentist will donate a certain amount of his time. It never occurs to them to organize a public clinic where the poor can receive food granting that the grocer will donate the food or to organize a building project supplying better homes for the needy granting that the contractors will supply the labour and material. That is a different matter in the minds of these zealous, public servants.

The question often arises, also, as to why a dentist cannot give a reasonable proportion of his time for free service in hospitals or clinics because his medical confrère does this, failing to realize that the conditions are entirely different. It is a great advantage to a physician to be attached to some hospital because many of his private patients have to be looked after in such an institution. When he goes to the hospital to see these patients he can quite easily visit patients in the public wards and prescribe treatment. It would be a very different matter if he had to spend a few hours doing restorative work for these ward patients as a dentist would be called upon to do in many cases. Then again the surgeon who gets \$500 or \$1,000 or more for a half hour operation can well afford to operate on some charitable case for nothing. In other words the physician, and particularly the surgeon, has much to gain from his hospital association while the average dentist receives very little benefit from such a connection, as arrangements are usually carried out. It should be noted, also, that the average salary of the physician, in spite of his free hospital service, is about thirty per cent higher than the average dental income.

Another phase of this problem is that after this war no one expects things to be as they were previously. It is hard to prophesy what changes will be

brought about but that there will be at least a greater trend towards socialization of the professions seems assured. As this movement develops, the question as to what value should be placed on public dental service is a matter of major importance and I submit that the value dentists place upon their time in school dental service will be one of the factors taken into consideration.

The problem of what remuneration a dentist should receive for working in a school clinic is a very real one and will become a greater one in the future. I have reason to believe that in many instances the salary has a definite bearing to that paid to school teachers, which should not be. In an article by H. E. Manning, K.C., appearing in *Toronto Saturday Night*, November 23, 1940, it is stated that the average salary for high school teachers in Toronto is \$3,115 and for public school teachers \$2,122 and they get a retiring pension at sixty-five which costs a small annual contribution. It is stated that this is more than 35% higher than the salaries paid in the suburban municipalities. The writer deplores these high salaries and asks: "Do the doctors and the dentists, the engineers, the architects and the lawyers of Toronto get average incomes so high?" On the other hand, a special committee on salaries presented a report at the last annual convention of the Manitoba School Trustees' Association that in the rural areas of the Province of Manitoba eight teachers receive less than the statutory minimum salary of \$500, while 532 receive the bare minimum and no more. No fewer than 408 teachers got only \$550 while 261 got \$600. Only five rural teachers received \$1,000 or more. The Canadian Teachers' Federation goes farther. It points out that similar conditions prevail in all the provinces.

Education is provided by the State and in the writer's opinion health is more important than education. When this opinion prevails the State will play a much greater role in the practice of dentistry. If dental salaries are to be based on what is actually paid school teachers it does not take a chartered accountant to figure out what many of the members of our profession will face from a financial standpoint.

We must not say that the question of what arrangements certain individuals or groups of individuals make with school boards or a civic health department with regard to the care of school children's teeth is not a matter of general concern. It is a matter which will eventually affect every dentist in Canada whether he wishes it or not. This is indeed a national problem and one that requires the careful study by the best brains in our profession. For those who are at all interested I would point out that there appears an excellent article on this subject in the Forum Section of this issue of the *Journal*, an article entitled, "Can a Dental Service Program be an Educational Venture?" by C. E. Turner, A.M., D.Sc., Dr.P.H., Professor of Biology and Public Health, Massachusetts Institute of Technology.

From a survey of these various problems, I am convinced that the Canadian Dental Association should attack this problem seriously and try to

arrive at some kind of reasonable standard which can be aimed at throughout Canada.

I would even now draw some conclusions for consideration, as follows:

1. Dental Service in the schools should be fundamentally educational in nature.

2. Children from self-supporting homes should be educated to go to their dentist at least once a year or, better still, twice a year, rather than to instil the idea that the government owes them dental health.

3. Education and prevention should be separated from treatment.

4. Dental restorative work should never be undertaken for our school children in public clinics except in case of the indigent or near indigent.

5. Dental service for the indigent should be provided by the government through the Department of Health and not through the Board of Education.

6. The Director of Dental Services should be a dentist and not a physician.

7. That some standard remuneration for such service should be agreed upon well above what is generally considered adequate at the present time and that dentists should be encouraged to refuse to work below the figure agreed upon.

8. That greater emphasis should be placed on the care of the pre-school age child.

9. That the Canadian Dental Association should appoint a standing committee to study these problems and try to solve them in the interests of the people of Canada, as well as in the interests of the members of the dental profession.

BOOK REVIEW

Prescription Writing and Formulary for

Dentists, by L. Richard Cipes, Ph.G., D.D.S., New York City. Attending Dentist, New York City Department of Health, also Mt. Vernon, N.Y., Department of Health. Formerly Instructor in Oral Surgery, New York University College of Dentistry. 233 pages. Published 1941 by Dental Items of Interest Publishing Company, Brooklyn, New York. Price, \$3.75.

The purpose of this book is to aid the dental student and the dental practitioner in the writing of dental prescriptions. It covers such subjects as "Action of Antiseptics on the Sterilization of Instruments;" "Definition, Action and Use of Antiseptics, Caustics, Hemostatics, Anaesthetics, Sedatives, Hypnotics and

Narcotics in Dental Therapeutics;" "Methods of Prescription Writing;" "Oral Diseases and Prescriptions Used in Their Treatment;" "Dental Remedies and Formulae;" "Suggested Courses in Pragmatic Dentistry, Pharmacology and Prescription Writing."

As the biological concept has begun to take its rightful place in the practice of modern dentistry more emphasis must be placed by the dentist upon prescription writing and less upon the all-too-common practice of handing to a patient some prominently advertised, freely distributed sample.

"Prescription Writing for Dentists" is a definite contribution to the enhancement of the dental profession and it will assist in drawing closer together medicine, dentistry and pharmacy, for the betterment of all concerned.—M. H. G.

CORRESPONDENCE

Copy of Letter from Customs Division to Dr. Bradley

To Sydney W. Bradley, M.D.S., Ottawa, Ontario

This has reference to your interview with Departmental Officers recently regarding the importation of certain articles required in the dental profession.

The rulings with respect to the articles in question are as follows:

The Department will issue permits for limited quantities of cuspidor bowls and cuspidor shields which, it is understood, are manufactured of opal glassware.

In the case of the tooth cleaning brushes used in dental engines, applications for a limited supply of these articles will be considered, provided the articles are not manufactured in Canada. Mr. D. L. Lawrie, Secretary of the Canadian Dental Trades Association, has informed the Department that two Canadian companies are considering the manufacture of these articles.

The teeth are apparently of chief value in the shade guides, and under such circumstances they are dutiable under tariff item 288. In some cases aluminum is used in the manufacture of these articles. Tariff item 288 is included in Part One, Schedule One, of the War Exchange Conservation Act. Articles of aluminum are required to be imported under permit under the Order in Council controlling the importation of aluminum. Applications for the importation of these articles will be dealt with, it being considered that one permit for each shipment is sufficient.

It is assumed that applications for the permission to import the above articles will be from dealers of dental supplies in Canada. When making application they should be for not more than two or three months' supplies and be accompanied by a statement showing their last year's importations of each article, supported by entry numbers and dates.

(Signed) W. D. ARMSTRONG,
For Commissioner of Customs.

EDITOR'S NOTE: *As the result of recent legislation by the Federal Government a number of articles essential to the efficient practice of dentistry in Canada were placed on the embargo list. Dr. Bradley, the Chairman of our C.D.A. Legislative Committee, discussed this*

problem with the Commissioner of Customs with the result outlined in the above letter.

Dr. Bradley has done notable work in connection with any matters which have been entrusted to him by the Canadian Dental Association.

Nairobi, Kenya, Africa.

To the Editor, Journal of the C.D.A.

You haven't heard from your South African correspondent for a long time. I walked out of my practice, joined the Army and have been on the move ever since.

Before this War we had no Dental Officers in the South African Army at all and even up to last July we had a mere handful. Since July a number of courses have been held for Dental Officers and a large number of dentists have given up very busy practices and are now in the Army. At present there is no separate Army Dental Corps in the S.A. Army. Dental Officers are part of the S.A. Medical Corps with equal rank and pay.

The former President of the S.A. Dental Association has been appointed Director of Dental Services in South Africa while in East Africa we have a Lieut.-Colonel of the Army Dental Corps. The service has been totally reorganized and is rapidly expanding and although we have not yet come up to your standard of one dentist to 500 soldiers, the service is very efficient and growing daily. An endeavor is made to get every man dentally fit before he leaves S. Africa, but many men got up North before the service was properly organized, the result being that all the Dental Officers in the field are kept very busy and many dentures have been made.

Every Medical Unit has a Dental Officer attached and the Mobile Dental Units go to isolated places not served by Medical Units. Also the Mobile Units are used to help out in any area where pressure is greatest.

I could tell you much of interest reconditions in these remote areas, but we have to be careful not to convey any information to the enemy. This country abounds in game of every conceivable species from fleas to elephants and we get very familiar with both. There is an excerpt from Martin Johnson's Book in

the "Readers Digest" of September, 1940, wherein parts of the country are very well described and you get some idea of the difficulties we are fighting under.

I think that the Dental Services are very much appreciated by the troops and dentistry will come out of this War with an enhanced reputation.

I haven't seen a dental journal for months

and so have no idea what you are doing. I do know that Canada's War effort is terrific and our Country is also putting everything into it. We are confident of Victory and very keen.

My very best wishes to you and when our cause has triumphed we may meet.

(Signed) HARRY GOLDIN,

O.C. No. 3, Mobile Dental Unit,
South African Medical Corps.

DENTAL CORPS NEWS

News from Headquarters, Ottawa, March, 1941

Several Command Dental Officers have reported that the new classes of R.C.A.F. recruits show poorer mouth conditions than the earlier classes and consequently require more dental treatment.

Arrangements are almost completed whereby a number of dental students graduating this spring from the dental schools of Canada will be granted commissions in the Canadian Dental Corps as soon as their services can be made available.

A pilot model of a mobile dental clinic is nearly completed and it is expected that it will be available for service in the very near future.

In the last three months 27 new dental clinics have been opened in the Military Districts and 23 in the Air Training Commands in Canada, making a total of 50 new clinics established.

On March 19th fire destroyed Block 5 at Fort Osborne Barracks, Winnipeg. The C.D.A. Stores were saved although some damage was done by water. The small amount of damage was attributed to the efficient salvage work carried out by the C.D.C. personnel.

Steps are being taken for establishing an Officers' Club in Ottawa. The Director of Auxiliary Services has asked for the number of officers if this Corps stationed in Ottawa who would support such an institution. This information is being obtained.

The Dental Society of Nova Scotia and No. 6 Coy. C.D.C. have both contributed financial assistance in furnishing the Officers' Mess at Debert. The Calgary Dental Society has also contributed two rugs and two floor lamps.

A dinner in honour of the officers leaving for overseas shortly was given at the Laurentian Club by the officers of C.D.C. H.Q. Col. Lott gave a very interesting talk on matters pertaining to the organization of the Dental Corps, its present status and its future.

Discussions have been held with the appropriate officers of the R.C.N. concerning plans for a large dental clinic to provide dental service for R.C.N. personnel at Halifax.

A new five-chair clinic has been completed and occupied at Esquimalt, B.C. This is to take care of the dental requirements of the personnel of the R.C.N. at this Station.

M.D. No. 6, Headquarters, Halifax, N.S.

The following is the work completed from November 1, 1939 to December 31, 1940:—

Appointments	74927
Prophylaxis	3914
Extractions	24771
X-rays	620
Fillings	31923
Gold inlays	124
Gold foil	38
Treatments	7328
Crowns	71
Bridges	42
Dentures	3329
Repairs	890

—Statistics received by Dr. S. G. Ritchie
from Major Gordon Dawson.



Major M. A. Clay, D.D.S., of Saint John, New Brunswick, District Dental Officer at Military District No. 7, Saint John, N.B. Major Clay succeeds Major J. F. Edgcombe who is now Officer Commanding, 3rd Divisional Dental Company.

He was graduated from Dalhousie University in 1923 and practised in Nova Scotia until 1930, when he moved to Saint John.

He enlisted in 1916, serving in France with the 1st Division Signal Company, attached to the field artillery.

During the last ten years he has taken an active part in the work of the Canadian Legion. He has served as President of the Saint John Branch and was Vice-president of the New Brunswick Command, when he resigned to join the Canadian Dental Corps in November, 1939.

Major Clay is married and has one daughter and one son.

NEWS FROM THE PROVINCES

ONTARIO:

Ontario Dental Nurses' and Assistants' Association

The Ontario Dental Nurses' and Assistants' Association will hold its Tenth Annual Convention in Toronto, at the Royal York Hotel, May 19-21, when members from all over the Province, from Montreal, Winnipeg and the U.S.A. will meet together.

The Toronto Chapter will be Hostess at a Reception Tea to the delegates in the Committee Headquarters, Sunday evening from seven to nine o'clock.

About 25 table demonstrations will be given by members of the Association in conjunction with the dental clinics, on the Monday morning. These will be in charge of Irean Checkley, Toronto.

Convention meetings will start Monday afternoon at 2 o'clock, with Loretta McCaughey, London, as Convention Convener. A good program of meetings should follow.

A banquet, to celebrate our tenth birthday will be held in the Oak Room of the Union Station at 6.30 p.m. Monday, for which a jolly program has been prepared. It is in charge of Tomye Turner. The Achievement Trophy will be awarded at this time, also the prize for the winner of the contest on "Ten Commandments for a Dental Assistant."

On Tuesday 9 a.m. the meetings will be officially opened by Dr. E. A. Grant, acting President of the Ontario Dental Association, followed by a welcome by Dean A. D. A. Mason and others.

There are several surprises in store, to celebrate our Tenth Birthday, so be sure to be on hand at all meetings and in your places early.

The Complimentary Luncheon will be held on Tuesday as usual in the Roof Garden, with Mildred Brown in charge. There will be an outstanding speaker, to be announced later, and the trophies for the best poster on the



CANADIAN DENTAL CORPS — H.Q. STAFF

BACK ROW: Cpl. H. A. Davies, Cpl. P. J. Mulholland, Cpl. J. K. McNally, Cpl. F. G. Shipman, Pte. D. T. Moffatt, Pte. G. A. Stokes, Pte. S. J. Husselbee, Pte. D. O. Paquin, Pte. R. M. Headley, Pte. J. K. Boyd, L/Cpl. J. T. Conlin.

CENTRE ROW: Lieut. R. V. Fletcher, Q.M.S. C. G. Hunt, Cpl. E. Clark, Pte. T. C. French, Pte. R. D. Munro, Pte. D. H. Wright, Pte. R. S. Edey, Sgt. H. C. Johnson, Pte. R. J. Kihl, S/Sgt. J. T. Peters, Lieut. G. H. Tobey.

FRONT ROW: Lieut. H. Macpherson, Capt. W. J. Smith, Capt. L. E. Riddolls, Major D. S. Coons, Colonel F. M. Lott, Lt.-Col. G. L. Cameron, Major C. C. Rous, Capt. G. D. Leggett, Capt. J. A. Nattress, Capt. H. L. Windrim.

"The Dental Assistant" and for the best table demonstrations will be awarded.

Tuesday evening will conclude with a tour of the Royal York Hotel, showing the Royal Suite and other places of interest.

Wednesday at 9 a.m. more meetings of importance will be held followed by the Installation Service of officers elected at the Business Session, Tuesday afternoon for the coming year.

Three NEW chapters will meet with us this year, Kitchener, Sudbury and Niagara District. May we have a large attendance to greet these new members—and right here and now may we *plead* with *all* Ontario dentists to see that *YOUR Assistant* is in *attendance* at *Convention*, *planned especially to help her* in her work with *you*.

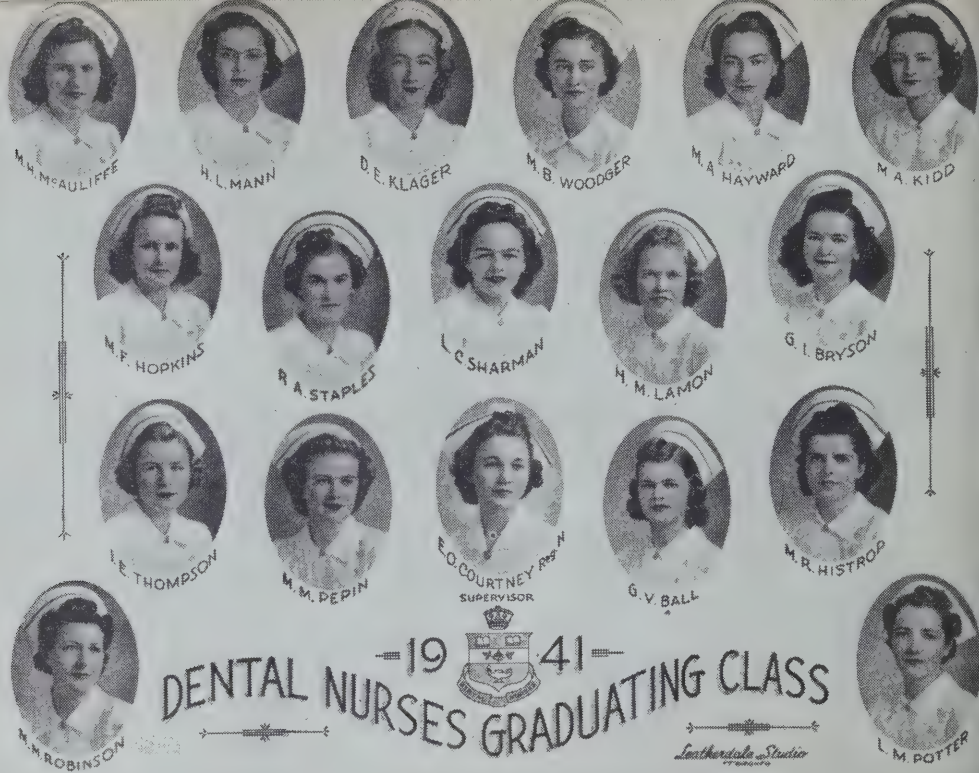
Convention hostesses for this year are Dorothy Scott, Windsor, and Doris Gregory, Toronto. Your convention fee includes your luncheon and banquet tickets. Let us make this, our Tenth Birthday, an outstanding year.

TORONTO—The April meeting of the Toronto Chapter took place on Monday 7 in the Royal York Hotel with Irean Checkley presiding. Arrangements for posters and clinics at the coming Convention were made, also for the Reception Tea on the Sunday night May 18 at which Toronto is to play hostess this year, to the incoming delegates.

Reports were given of the splendid work being carried on by the War Committee and plans completed for the Rummage sale on May 10.

Mr. J. Strang, formerly of England gave an interesting talk on Canada's shipbuilding for War and the building of Corvettes for the Canadian Navy. Then Mr. Jack Blaber told of interesting phases of Britain's War efforts leading up to the War. Both gentlemen answered questions relating to present conditions.

KATHLEEN SIMPSON, *Recording Secretary*.



KITCHENER—The Kitchener District Dental Nurses and Assistants held their regular monthly meeting on March 4 in the Maple Club with twelve members present and President Edith Inkster in the chair. Mr. A. McDonald addressed the meeting.

A supper meeting was held on April 1, following which the members went to the office of Drs. Hemmerick and Ross and continued with the business of the evening in preparation for the coming Ontario Convention.

RUTH CLARK, *Secretary*.

NIAGARA DISTRICT—The Niagara Chapter of Dental Nurses and Assistants held their monthly meeting in the office of Dr. Tanton, Niagara Falls on March 3 with six members present.

Miss Mary French President took charge of the meeting and read articles from the report of last year's Convention to help the members in preparing for the coming Ontario meeting.

A very enjoyable supper was served by Gertrude Pangborn with the President pouring tea. Ontario welcomes these new delegates to the Convention this year.

GERTRUDE DOYLE, *Secretary*.

Graduation in Dental Nursing

The Commencement Exercises of the Class of 1941 in Dental Nursing will be held on Wednesday, June 4th, in Convocation Hall of the University of Toronto, and diplomas will be awarded by President Cody.

The curriculum of this course is adjusted constantly to keep it in harmony with the changing trends of dental practice. It is felt these young women are as well trained as possible in one academic year to assist a dentist with all routine and detail in his office which could properly be assigned to a dental nurse. Lectures are given in seventeen subjects totalling 167 hours. The class laboratory instruction in various subjects includes 180 hours in prosthodontia and casting of inlays. The time not devoted to lectures and laboratory classes is spent in gaining practical experience in the various departments throughout the college. Particular attention is given to lectures and practice in bookkeeping suitable for a dental office, and typewriting. Lectures are given on Ethics and Jurisprudence, and throughout the course a professional viewpoint is developed. The idea is to train the young women in fundamental principles which they

can readily adjust to the service desired in any particular dental office.

The increasing number of enlistments in the Canadian Dental Corps is leaving dentists in some communities with more demand for dental service than they are able to cope with. The services of a dental nurse can relieve the dentist of numberless time-taking matters and routine procedures that will permit the dentist to give his undivided attention to the actual dental operations.

The seventeen young women in the present class were carefully selected from a considerable number of applicants, as being suitable for this course. Before acceptance, when it could be arranged, there was a personal interview, and the appearance and personality were considered, as well as the educational standing.

Any dentist desiring the services of a dental nurse may obtain information by telephoning MI 9060 or writing to Dean Arnold Mason, Faculty of Dentistry, University of Toronto, 230 College St., Toronto.

Members of the 1941 Class in Dental Nursing

Miss M. R. Histrop, Niagara Falls; Miss M. F. Hopkins, Orangeville; Miss M. A. Kidd, Cobourg; Miss H. M. Lamon, Oshawa; Miss M. H. McAuliffe, London; Miss H. L. Mann, Cobourg; Miss M. M. Pepin, Windsor; Miss M. E. Robinson, Vancouver, B.C.; Miss M. B. Woodger, Drinkwater, Sask.; and the following, all of Toronto: Misses G. V. Ball, G. I. Bryson, M. A. Hayward, D. E. Klager, L. M. Potter, L. C. Sharman, R. A. Staples and I. E. Thompson.

London Dental Society

The London and district golf tournament will be held on Thursday, June 12th, 1941, at Highland Golf Club, London, Ontario. Entry fee of \$3.00 includes dinner and green fees. Play will begin at one o'clock.

Ottawa Dental Society

At the annual meeting of the Ottawa Dental Society held March 17 in the Chateau Laurier the following officers were elected:—President, Dr. W. H. Pritchard; Vice-president, Dr. L.

B. Braden; Secretary-treasurer, Dr. W. O. Gardner; and Directors, Drs. Graham Hudson, Paul Cote, J. D. Ferguson, Lorne Barnabe, Fred Thompson, C. A. Findlay and E. Macartney.

Dr. Macartney presented a report on the newly established dental clinic stating that during the past month 130 students had been treated. Dr. F. Clarkson, of the University of Toronto, spoke on "The Tooth in Folklore and History."

The main feature of the evening was the presentation of engraved cigarette lighters to five members of the Society who have enlisted with the Canadian Dental Corps. They are Doctors E. Box, W. Miles, J. K. McKeown, W. Grant and E. Marshall.—*Ottawa Citizen*.

London Dental Society

The March meeting of the London Dental Society was held in the Hotel London, on the 29th with the President, Dr. D. A. Campbell, presiding. The guest speaker of the evening was Dr. Stanley Brown of Ithaca, Michigan, who spoke on phases of "Children's Dentistry." His paper was well illustrated with table models and posters. Dr. J. O. McCutcheon thanked Dr. Brown for his splendid paper.

DR. WALDEN, *Secretary-treasurer*.

Dental Nurses' Alumnae Meeting

On April 8, the Dental Nurses' Alumnae, held their monthly meeting at the Women's Union, 79 St. George Street.

The guest speaker, Miss Barker, chatted informally to the members about Occupational Therapy. The different steps taken in helping patients recover from various forms of illness and disease were colourfully outlined with the aid of pictures of real-life examples.

During the business meeting, final arrangements were made for the Graduation dinner and dance to be held on May 28 following Graduation. The dinner, as in previous years, will be at the Granite Club and the dance in the Oak Room of the King Edward Hotel.

On the suggestion of one of the members, it was decided to have a baby shower next fall for the refugee children.

HELEN MCKINLEY, *Cor. Secretary*.

QUEBEC:

Montreal Dental Club

The Montreal Dental Club held its March Meeting on March 20, in its Club Rooms in the Drummond Medical Building.

Dr. R. B. Bell, one of our own members, was the speaker. His subject was: "Business Administration of a Dental Office." He explained his system of recalling patients, and dealt with the subject of contracts between patients and dentists. He mentioned many other important points, also.

The next speaker was Major Harry Driver, O.C. for District No. 4 of the Canadian Dental Corps. Major Driver made an able and urgent appeal for more volunteers from the ranks of the Montreal Dental Club members, and said that he needed at least five more dental officers now, and that in the future the need would be still greater.

Dental Nurses and Assistants

The January meeting of the Montreal Dental Nurses' and Assistants' Association was held in the Club Rooms, Drummond Medical Building. Miss Lois Winters presided and, following a short business meeting, she introduced Miss Hilda Boucher, R.N., a social service worker for the Royal Edward Institute.

The annual banquet and election of officers was held on the 4th of February at "Chez Ernest Restaurant." Presentations were made to the Honorary President, Miss Mildred Starr, and the Past President, Miss Lois Winters. Our new President, Miss Ardis Crowell, was also presented with a corsage. The newly elected officers are: President, Miss Ardis Crowell; Vice-president, Miss Bonner Lesage; Treasurer, Miss Dorothy Ross; Recording Secretary, Miss Dorothy Arnott; Corresponding Secretary, Miss Marie Keenan; Program Convener, Miss Nora Johnston; Membership Committee, Chairman, Miss Nancy McCunn; Publicity, Miss Eve Miron; Clinic, Miss Mildred Starr.

On March 4 a short business meeting was held in the Club Rooms, which was followed by a Symposium on the duties of a dental assistant, given by Dr. Robert B. Bell. The President, Miss Crowell, was in the chair.

EVE MIRON.

BRITISH COLUMBIA:

272 Dentists Registered in B.C.

British Columbia has 272 dentists licensed under the Dentistry Act as members of the College of Dental Surgeons, according to a list announced by W. J. Lea, registrar.

The list includes 31 in Victoria and 10 at other island points, 25 in the county of New Westminster, 152 in Vancouver, 4 in North Vancouver and 11 in Prince Rupert county, and 39 in the northern and southern interior portions of the province.—*Victoria Times*.

ALBERTA:

Col. Lott Visits Dental Societies

During his tour of inspection in Alberta Col. Frank Lott was the guest of honour at the Calgary and Edmonton Dental Society meetings recently. He gave a very interesting talk on the organization of the Dental Corps, its progress to date, and some idea of its future needs and activities.

One could not help but be impressed by the immense amount of work and planning necessary to create the Dental Corps. Judging by the efficiency of the organization in Alberta, one can feel sure that an important and satisfactory service has been added to the Canadian Active Service Force.

University of Alberta Dental Club

The Dental Club of the University of Alberta, undergraduate club of the Dental Dept., held its 16th annual banquet at the Corona Hotel on March 15.

At this function a formal farewell and expression of goodwill was given to the 13 members of the Senior Class. A large proportion of the class intend to enlist at once in the Canadian Dental Corps.

SASKATCHEWAN:

Saskatchewan Dental Association

The above Association has decided to put on District Conventions during May at several points in the Province. This is in lieu of the fact that the Convention which had been planned for Waskesiu in the Prince Albert

National Park last June was cancelled at that time.

Dr. W. W. Irwin was re-elected as President of the Moose Jaw Wild Animal Park Society, at the annual meeting held early in April.

MANITOBA:

Winnipeg Dental Society

The April meeting of the Winnipeg Dental Society is always the end of the Society's year of endeavour and reports are heard from the officers of the year including committee chairmen, one of which is the chairman of the nominating committee. The reports heard on April 17 were unusual in several respects. The President, Dr. Ben Toombs, said that the Society had ended the year with more money than the bank turned over to them in 1940 and that the executive committee of five members had shrunk to two, the other three having joined the Dental Corps. The paid-up membership was 90 in number and this along with the members in the Dental Corps who are not asked to pay dues brought the registration up to a record in the history of the Society and the average monthly attendance above the average through the years. The nominating committee produced a slate of officers who would not likely be enlisting at the present time. They are,—President, Dr. E. J. Robb; Vice-president, Dr. Douglas Brown; Secretary-treasurer, Dr. Gordon Elsey; Drs. D. McCord and M. R. Steen are executive members without portfolio, which means of course that they may be called on for any duty the rest want to assign to them.

One of the outstanding meetings of the season was a joint meeting with the Winni-

peg Medical Society to listen to an address on vitamins from Dr. Butt, of the Mayo Clinic. To those of the dental profession who listened to Dr. Price, of Cleveland, talk to the last joint meeting of the two Societies on calcium therapy and vitamin D about 15 years ago it was somewhat significant that the ratio of medical men and dentists attending the two meetings was entirely reversed in 1941 when about twice as many medical men as dentists were present. Fifteen years ago at the Price meeting not more than ten medical men were interested enough in vitamins to attend the meeting. In February 1941 over 100 medical men attended. It is quite significant also that on the same day this week that the Winnipeg Dental Society met a medical man spoke to the Winnipeg Canadian Club about nutrition. Most of the address was about vitamins and the medical man was none other than Dr. F. F. Tisdale, of Toronto, an authority on nutrition.

Dental Nurses and Assistants

The April meeting of the Winnipeg Dental Nurses and Assistants Association was held in the St. Regis Hotel on the 7th. Miss Juel Grose presided.

Speakers for the evening included Dr. Fred. Warriner; Mrs. J. Donally, telephone operator at the City Dairies Limited, speaking on "The Voice on the Telephone;" and Miss L. Veal, who read a paper given by Dr. Wallace Mitchell, of Hamilton, Ontario, at the Western Canada Dental Convention, entitled, "Getting along with People in the Dental Office."

Plans for the September tea were discussed, proceeds to be given either to the Lord Mayor's Fund or Queen Elizabeth Fund.

A. SCOTT.

EMPIRE NEWS

GREAT BRITAIN:

Medical Planning Commission

The British Medical Association has set up a Medical Planning Commission in co-operation with the English Royal Colleges and the Scottish Corporations to study war time developments and their effects on the country's

medical services both present and future. It consists of 70 members representing all branches of practice. It was said that the time had come for the profession to give serious consideration to the problems of reconstruction and reorganization in the field of medicine in the post war era. The opinion has already been expressed that the findings are

bound to be in favour of State service.—*Dental Record*.

Guy's Hospital

Recently two more high-explosive bombs added themselves to our already impressive list of direct hits. The first exploded itself in the front quadrangle without disturbing the well-muffled figure of Thomas Guy. The second bomb was of the delayed-action type and became buried some thirty feet in the ground between the colonnade and Martha Ward. A few days later the Bomb Disposal Squad, with perfect and expert organization, and with enviable daring, removed the neoplasm. An interesting sidelight on these men is that they receive no extra pay for their dangerous occupation and they are not voluntary. On asking one of the men whether he did not resent being made to serve on such a hazardous job, he proudly replied: "If you made this job a voluntary one you'd have the entire British Army turning out to do it."

And so, once again Guy's Hospital is left standing like a miraculous sphinx in a desert of ruination; other districts were not so fortunate and we were kept busy simultaneously evacuating the wards and offices near the delayed action bomb at one end, and receiving battered casualties at the other.

When our stairs and lifts have been bombed out of existence we have built temporary wooden stairs and skids, when wards have been destroyed, we simply screen off the wrecked portion and use what is left, when the stream of casualties threatens to fill all the available beds, the evacuation service starts up and the congestion is relieved, and all this is accomplished often during an aerial bombardment sufficient to make many a world war veteran shrink with fear. Yes, this is an enviable record, with accomplishments enough to satisfy the conscience of any man whose sole desire is to serve his country.—*Guy's Hospital Gazette*, March 22, 1941.

GENERAL NEWS

C.D.A. Seeks Incorporation

Notice is contained in the current issue of the Canada Gazette that the Canadian Dental Association will apply to Parliament for incorporation under Dominion laws. The association, of which virtually all dentists in Canada are members, corresponds to such professional bodies as the Canadian Bar Association and the Canadian Medical Association. It has functioned for some years without incorporation. Orian E. B. Low, Ottawa solicitor, is acting for the association in its application.—*Ottawa Evening Journal*, April 11, 1941.

Harvard Aids British Dentists

In response to an appeal from England for dental equipment, especially portable x-ray apparatus, a Harvard Committee on Dental Aid to Britain was formed early this year, under the direction of Leroy M. S. Miner, Dean of the Harvard Dental School, with the enthusiastic support of students and the alumni association. At a benefit lecture and

musicales held at the Hotel Somerset in Boston, under the sponsorship of this Committee, \$1500 was raised to purchase and send x-ray equipment to England.—*Oral Hygiene*.

Miss Monica Mugan will interview Miss Canteen Walla and Dr. Gin Walla, of India; Dr. Tickle and Dr. Smith of Australia, on Canadian National Network, Thursday, May 29th from CBL and local stations, 5 p.m. E.D.S.T. Upon going to press we learn that Major Ira Hamilton, President of the Ontario Dental Association, second in command of the Overseas Canadian Dental Corps, may possibly be interviewed on the air in the near future. Watch local papers for further details.

Tax-Aided Dental Care Proposed for Philadelphia

Proposals for a tax-supported program of dental research and tax-supported dental care for low income families were coupled by health authorities here yesterday with a prediction that present hospital insurance plans

would eventually be extended to medical and dental practice.

"What's the use of going on educating people to go to a dentist twice a year and eat a balanced diet when we know perfectly well they can't afford to do either?" asked the guest speaker, Dr. Leona Baumgartner, of the New York City Department of Health.

"We must stop beating around the bush, merely advising people to brush their teeth and all that," said Dr. Milton Rose, professor of public health at the University of Pennsylvania. "Are we going to tax ourselves to provide adequate dental care or aren't we? I don't know the answer, but I do know that we have to face that question."

"We've made enough surveys and studies to prove beyond any doubt that the dental health of our children and adults is poor," said Dr. Walter S. Cornell, medical director of Philadelphia public schools. "We don't need any more information to make a start at correcting the trouble. We need action."

Basing his prediction on an observance of trends since 1900, Dr. Wilson G. Smillie, professor of public health and preventive medicine at Cornell University, said the future, provided the social structure remained unchanged, would probably see the great middle class organized into insurance groups providing medical and dental care as well as hospitalization, while the "submerged third" would enjoy the same benefits through tax-supported insurance. . .

Dr. Linwood G. Grace, chief of the dental department, Pennsylvania State Department of Health, said that selective service medical examinations are showing that the dental health of the Nation is just as bad as it was in 1917, despite all the educational programs that have been conducted.

"I dispute Dr. Baumgartner on one point," Dr. Grace said. "I don't believe it is hopeless to try to care for all who need it. If we organized the dental resources of each community in an honest and intelligent way, we would find 25 years from now, when we are getting ready for the next war, that the dental health of the Nation had improved vastly."

—*Philadelphia Pa., Inquirer*, 2—5—41, per A.D.A. Release.

Eighth Annual Postgraduate Course in Periodontia

*New York University College of Dentistry
New York, New York.*

New York University College of Dentistry will hold its eighth annual postgraduate course in Periodontia for twenty sessions, as follows: Schedule A—morning and afternoon sessions, June 16 to June 27, 1941. Schedule B—morning and afternoon sessions, June 16 to 18; mornings only, June 19 to July 9. All dates inclusive. The fee is \$100. **COURSE LIMITED TO FIFTEEN MEN.** Preference given in order of receipt of application.

The course will include aetiology, diagnosis, and treatment of periodontal disease; various techniques of pocket eradication, with conservative treatment stressed; Vincent's infection; diagnosis of types of bone resorption; mouth manifestations of systemic disease; periodontal foci of infection; toothbrushing; instrumentation; balancing of occlusion. The course is taught by lectures and clinical work, each student treating several cases.

Instruction is given by Doctors Samuel Charles Miller, Sidney Sorrin, J. Lewis Blass, and the entire Periodontia faculty.

For further information and application, address the Office of the Dean, New York University College of Dentistry, 209 East 23rd Street, New York, New York.

Health Program for 20,000 Unemployed Youth Outlined

How \$102,000 will be spent by the National Youth Administration during the next six months in an effort to benefit the health of 20,000 unemployed youth in California was outlined yesterday by Robert Wayne Burns, N.Y.A. director in this state.

Burns stated that Lorne W. Bell, executive secretary of the down-town Y.M.C.A. here for the past five years, has been appointed State Health Supervisor. He will be aided by Dr. W. L. Halverson, public health officer of Pasadena, who will serve as a consultant.

Bell and Dr. Halverson will co-ordinate their work with the State Department of Health, the State Medical Association, and the health departments of all the major cities in California, it was stated.

The campaign for health improvement will include health examinations, preventive and

reparative care and dental work. Recommendations for diet, recreation and types of employment for each youth will be given.

The N.Y.A. plans to spend \$2,500,000 on the national youth health program by August. —*Los Angeles Times*: 1—13—41, per A.D.A. Release.

A.M.A. Is Convicted of Conspiracy to Violate Sherman Anti-Trust Act

The American Medical Association was convicted on April 4 of charges of violating the Sherman Anti-Trust Act. A Federal District Court jury, after deliberating twelve hours on the case, freed the eighteen individual defendants but convicted both the A.M.A. and the Medical Society of the District of Columbia. Among the individuals not convicted were most of the major officers of both the national and the district society.

The effect of the decision against the

A.M.A. was to place the legal definition of a "trade" on the practice of medicine. If it were not, as defense attorneys argued, the Sherman Anti-Trust Act could not apply and convictions could not be secured on the grounds of restraint of trade. It was understood that the adverse decision would be appealed immediately by A.M.A. attorneys to the District of Columbia Court of Appeals and then, if necessary, to the Supreme Court of the United States.

Considerable interest and importance attaches to the eventual outcome of this suit. If medical practice is held to be a "trade" it is almost certain that the practice of dentistry will be construed in similar fashion. The permanent influence of an adverse final decision upon the work of professional societies can only be guessed at the present time but it is likely that many changes will be necessary. —*Fortnightly Review of the Chicago Dental Society*, April 15, 1941.

IN MEMORIAM

James M. Magee, of Saint John New Brunswick, aged 80, died March 27 at Wolfville, N.S., where he had made his home for the last two years.

He commenced the study of dentistry in the office of Dr. P. Caldwell, of St. John. He received further professional training in the Pennsylvania College of Dental Surgery and was graduated in 1883.

He is a Past President of the Canadian Dental Association, the Dominion Dental Council and the New Brunswick Dental Society. He retired as a Lieut.-Colonel of the Canadian Army Dental Corps following the last war.

In 1933 the New Brunswick Dental Society conferred a life membership on Dr. Magee in recognition of his completion of 50 years of active practice. The decoration of the "Officer of the Order of St. John of Jerusalem" was bestowed on him for his long and valued service as a member of the St. John Ambulance Association.

He was an Anglican in religion and was senior warden of St. Paul's Episcopal Church. Interested in public, social and educational welfare, he was a member of the Saint John

Health Centre Association, member of the Board of Governors of the New Brunswick Museum, a past president of the Canadian Club and he was also identified with the Y.M.C.A. and the Kiwanis Club.

He was an early golf enthusiast and had been president of the Saint John Golf Club, the parent of the Riverside Golf and Country Club. Three times champion of the first club, he later became a life member at Riverside; also he was fond of curling and was a popular member and past president of the St. Andrew's Curling Club.

It was said of him that never had he been known to make a disparaging remark concerning any of his fellow dental practitioners and courtesy and kindness were his greatest characteristics. He gave most generously of his time and talents and means to further the interests of the dental profession and to help the less fortunate. Dentistry has lost a great leader and Canada a great citizen.

Dr. Magee is survived by his widow, two daughters, one sister and two grandsons. A third daughter died about two months ago.

... SECTION FRANÇAISE ...

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Message du Président de l'Association Dentaire Canadienne*

Depuis que je suis devenu président de l'Association des dentistes canadiens, j'ai toujours eu un vif désir d'adresser à mes associés de langue française un message en leur langue. En vérité je me rends bien compte que cela n'est pas strictement nécessaire; car, tandis qu'il n'y a qu'une proportion relativement faible de nos collègues de langue anglaise qui puissent être touchés par un message en français, la langue anglaise est familière à l'immense majorité d'entre vous. A cet égard vous avez droit à des félicitations, car votre connaissance des deux langues vous met à même de parcourir un domaine intellectuel et scientifique beaucoup plus vaste que ceux qui se bornent à en savoir une. Je n'ai pu moi-même remédier à mon infériorité sur ce point que grâce à la complaisance d'un collègue* de l'Université Dalhousie qui a bien voulu traduire ce message.

Nous, Canadiens d'aujourd'hui, nous accomplissons notre tâche dans des conditions qui sont l'aboutissement de trois siècles d'émouvante histoire. Durant la première moitié de cette période les pionniers français et anglais ont employé leur vie et leur énergie à lutter contre la nature, contre les habitants primitifs du pays, et aussi les uns contre les autres. Au cours de ces combats chacun des deux groupes fit preuve d'une vigueur et d'une ingéniosité qui imposèrent le respect et l'admiration à l'adversaire. Le résultat fut que, le jour où cessa l'état de guerre, les artisans du traité de coopération se proposèrent pour but de conserver la langue, les traditions et la culture de l'un et de

* Traduction du professeur René Gautheron, agrégé en lettres, chef du département des langues modernes de l'Université de Dalhousie.

l'autre groupe comme un héritage commun. C'est ainsi que nous nous trouvons aujourd'hui marchant côte à côte, dans un vaste pays riche d'un grand passé, de grandes ressources, et d'un avenir dont la création ne dépend que de notre courage, de notre esprit et de notre volonté.

Tout homme de profession libérale qui pense aux services qu'il peut rendre à son groupe et à son pays y pense naturellement en des termes qui lui sont dictés par sa profession même. Car c'est dans ce domaine-là qu'il est le plus vraiment chez lui. La préparation aux fonctions qu'il doit y remplir a absorbé une part considérable de son temps et de ses forces. C'est donc lui qui est le mieux qualifié pour résoudre les problèmes qui, dans son domaine, se posent à l'individu et au groupe.

Comme dentistes nous pouvons exercer une action efficace de bien des manières. La première et la plus importante est dans nos rapports avec ceux à qui nous donnons nos soins. Notre premier souci doit toujours être de consacrer toute notre habileté à découvrir, pour chaque cas qui se présente à nous, la solution la meilleure. Ceci est, au premier chef, une affaire individuelle; mais nous savons qu'il nous est possible d'accroître nos connaissances et d'élargir le champ de notre vision en nous associant pour échanger des idées et pour nous aider mutuellement. C'est ainsi que sont nées nos sociétés professionnelles: sociétés locales qui nous donnent les moyens de nous instruire dans le cadre de réunions intimes; sociétés provinciales où peuvent se traiter utilement les sujets dont l'ampleur dépasse les individus et les petits groupes; et enfin cette association nationale dont le programme est de mettre notre corps professionnel à même d'envisager des questions qui concernent le pays tout entier et d'en chercher la solution.

C'est dans cet esprit d'effort coopératif que s'est développée l'Association des dentistes canadiens (Canadian Dental Association). Une de ses plus importantes entreprises jusqu'ici a été la fondation de notre journal dont le caractère bilingue donne à tout dentiste canadien la possibilité de faire bénéficier ses confrères de ses observations personnelles dans la langue de son choix. Les adhésions de plus en plus nombreuses que l'Association reçoit à travers le pays nous sont un puissant encouragement. Et il est hereux qu'un tel appui nous soit offert, car la profession dentaire voit s'étendre chaque jour ses devoirs et son champ d'action. Je place les devoirs en premier lieu; car pour ce qui est du champ d'action, il s'est agrandi presque trop vite pour que nous puissions y suffire. Le public reconnaît de plus en plus l'importance de l'hygiène de la bouche et son influence sur la santé générale. Selon toute apparence on demandera chaque jour davantage non seulement que les soins du dentiste deviennent accessibles à un plus grand nombre de nos gens, mais aussi que l'efficacité de ce service aille en augmentant. Quelle connaissance exacte avons-nous des conditions dans lesquelles se sont développés les cas que l'on nous demande de traiter? La nécessité de recherches ininterrompues est évidente si nous voulons arriver à découvrir une sûre méthode préventive. Comme l'administration du service de santé connaît de mieux en mieux chaque jour les besoins des gens au point de vue de l'hygiène dentaire, elle se tournera vers nous comme vers ses guides naturels, et nous devons être prêts à lui donner toute la collaboration que l'on peut légitimement attendre de nous.

Les fonctions d'un organisme national sont nécessairement nombreuses. Si l'on veut que ses méthodes d'action soient tracées intelligemment et qu'il soit administré à la satisfaction générale, il faut qu'il ait l'appui de membres bien informés qui s'y intéressent comme à leurs affaires propres, et veillent, d'une manière constante, à ce que l'organisme national les représente vraiment, en envisageant les questions dans l'esprit de leurs meilleures traditions. L'histoire de la fondation et du développement de notre Société jusqu'à ce jour nous est un gage assuré que nous pourrons faire face, d'une manière réaliste et constructive, aux problèmes de l'avenir.

WM. W. WOODBURY, *Président de l'Association Dentaire Canadienne.*

Congrès de l'Association des Chirurgiens Dentistes de Langue Française de l'Amérique du Nord

5, 6 et 7 juin 1941

Aux confrères qui hésitent encore à décider s'ils iront ou n'iront pas au Congrès de Québec, j'adresse ce pressant appel:

Plus que jamais s'impose à notre attention l'impérieux devoir de se mieux connaître, de s'aider davantage les uns les autres. La page 200 du journal de l'Association Dentaire Canadienne devrait ouvrir les yeux des plus endormis.

S'unir, s'aider, ce n'est pas tout, il faut surtout se rendre compétents pour qu'un public de plus en plus soupçonneux ne conclut pas à l'inefficacité de notre profession.

Pour nous, Canadiens-français, ce n'est pas seulement un devoir d'état mais un devoir national, des plus impératifs. Inutile d'en dire plus long sur ce sujet et aucun de nous peut ignorer ce que cela veut dire sans trahir.

Or, c'est dans un congrès qu'on se rencontre, qu'on se comprend et qu'on s'instruit. Les organisateurs du congrès de Québec l'ont compris vous en jugerez par le court aperçu du programme qu'on m'a demandé de publier.

Dr Alcide Thibaudeau, rédacteur et professeur titulaire de la
Faculté de chirurgie dentaire de l'Université de Montréal.

JEUDI:

CONFERENCIERS et TITRES

Dr. Fred R. Adams, New York City—"Traitement du canal radiculaire". Dr. Ernest Charron, Montréal—"Causes des troubles post-opératoires après anesthésie tronculaire et avulsions dentaires". Dr. S. Gaudreau, Québec—"A la recherche de meilleures fondations sur lesquelles asseoir notre édifice professionnel". Dr. Jean Brault, St. Lambert—"Lecture sur la question de l'hygiène dentaire".

VENDREDI:

Dr. Lamar W. Harris, Chicago—"Matériaux plastiques pour couronnes, ponts, etc.". Dr. Edouard Morin, Québec—"Importance de la biopsie dans le diagnostic des affections tumorales et inflammatoires de la bouche". Dr. Emile Beaulieu, Québec—"Hygiène alimentaire". Dr. Alcide Thibaudeau, Montréal—"Dentistes de demain".

SAMEDI:

Dr. Viger Plamondon, Québec—"Influence du régime sur la morphogenèse des dents et du maxillaire". Dr. Gérard Plamondon, Montréal—"Où en sommes-nous en hygiène dentaire". Dr. E. Byron Kelly, Chicago—"Dents de résine acrylique".

JEUDI:

FILMS

Dr. Carlisle Bastian, New York, N.Y.—"La coiffe en porcelaine et son esthétique". Dr. J. R. Jeager, Denver, Colo.—"Tic Douloureux". Dr. W. F. Lasby, Minnesota, Minn.—"Toujours souriant". Dr. Geo. B. Winter, St. Louis, Mo.—"Principes fondamentaux pour l'ablation technique de la troisième molaire, etc."

VENDREDI:

Dr. Irvin Ante, Toronto—"Impressions for the edentulous mouth". Dr. G. P. Bannister, Cleveland, Ohio—"Root Canal Therapy". Dr. A. Laurence Dunn, Santa Barbara, Cal.—"A simplified method of taking dental pictures." Dr. Paul Geoffrion, Montréal—"Cas d'anadontie totale". Dr. John O. McCall, New York, N.Y.—

"Modern care of children's teeth". Dr. W. P. Walker, Pittsburg, Pa.—"Full upper and lower extraction and alveolectomy".

SAMEDI:

Dr. Adolph Berger, New York, N.Y.—"Ablation d'une canine incluse".

Nous remarquons le Dr. E. Byron Kelly, de Chicago, conférencier et auteur de renom, reconnu pour ses recherches et ses connaissances cliniques sur l'emploi des résines synthétiques en dentisterie.

Le conférencier démontrera une nouvelle méthode de restauration immédiate dans une bouche édentée, ainsi que la préparation d'un dentier entièrement composé de substance acrylique. Afin de décrire dans tous les détails, les différentes phases techniques de ce travail, le conférencier présentera un film technicolore de 1200 pieds, intitulé "Dents plastiques".

Infection Secondaire des Voies Gastro-Intestinales à la Suite de Maladies Buccales

SAMUEL WEISS, M.D., F.A.C.P.

Professeur de gastro-entérologie au N.Y. Polyclinic Medical School and Hospital.

(Traduction, A. Thibadeau)

En repassant la littérature qui traite des foyers d'infection comme cause de désordres systémiques, on y trouve ample matière à controverse et à doute. Cecil, Lichtmann et Gross en ajoutant leurs vues et leurs déductions sur ce sujet apportent des facteurs importants à l'étude des causes possibles de ces désordres. Je dois mentionner brièvement les récentes investigations de Birch-Hirschfeld, qui a décrit des organismes trouvés post mortem et qu'il croyait être les facteurs étiologiques de la fièvre rhumatismale. D'autres se sont trompés de même manière. Cependant plusieurs années après, Epstein et Kugel ont recueilli dans les mêmes conditions, des streptocoques, chez des sujets qui n'étaient pas morts de cette fièvre, des valvules du coeur on en a trouvé dans 40% des cas, du myocarde dans 47% et dans le courant sanguin 79%.

Irvine-Jones et Hitchcock ont démontré que des cultures de prélèvements venant de la gorge de patients atteints de fièvre rhumatismale donnaient des streptocoques qu'on ne pouvait distinguer de ceux des gorges normales.

Malgré le fait que des individus peuvent souffrir d'infections dentaires évidentes qui n'ont apparemment pas troublé leur état de santé, chez d'autres la moindre infection périapicale peut causer de sérieux désordres organiques. Dans certains cas, l'ablation de la dent rétablit l'ordre, mais chez d'autres le trouble persiste. On doit se rappeler que ces infections se répandent dans les lamelles osseuses autour des racines des dents et que dans certains cas, surtout ceux de vieille date, un résidu d'infection peut demeurer dans les os plusieurs années après l'extraction. Alors, une dent évidemment infectée autour de son apex doit être enlevée sans retard si le patient souffre d'une maladie organique qu'elle qu'en soit la forme. Chez un individu en santé un traitement conservateur peut se justifier, mais le médecin et le dentiste doivent reconnaître qu'il y a toujours un danger possible dans cette zone. Dans certains cas, il est impossible de déterminer si une dent dévitalisée est infectée ou non à sa racine; et c'est au médecin à décider d'après l'état général si la dent doit être extraite. Dans tous les cas douteux il faut l'étroite coopération du médecin et du dentiste.

L'infection périapicale, une pyorrhée alvéolaire avancée, le développement vicieux d'une dent et des caries peuvent être associés à des perturbations de n'importe quelle partie du corps. L'infection spécifique des muqueuses et des gencives causée par le bacille de Vincent peut en plus d'une infection généralisée causer des troubles gastro-intestinaux.

Des examens bactériologiques sont d'importance pratique, principalement dans les infections des tissus pulpaire ou périapicaux. Des cultures d'un abcès périapical type, dans la grande majorité des cas donnent des streptocoques viridans. Les filtrages isolés peuvent être divisés selon leur pouvoir de fermentation sur les hydrocarbures en sous-types variés, dont le *S. fecalis*, le *S. mitis* et le *S. salivarius* sont les plus communs. En règle générale ils peuvent être cultivés par la méthode aérobique ou anaérobique sur des milieux propices. Ils sont relativement sans virulence pour les animaux, quoique Rosenow, Haden et d'autres aient provoqué chez des animaux des lésions extra-orales semblables à celles dont souffraient les humains qui avaient fourni les cultures.

La présence d'une infection active peut se démontrer par des cultures au moment de l'extraction. Quand le prélevé est fait de la cavité buccale, il faut se rappeler qu'on peut toujours y trouver des streptocoques alpha de différents types et aussi que les beta n'y sont pas rares, mêmes dans une bouche saine. Les deux se rencontrent fréquemment dans les voies gastro-intestinales et leur présence dans des cultures de laboratoire n'est pas nécessairement significative. On peut trouver dans le livre d'autorité d'Appelton "Bacterial infection" 1933, des descriptions détaillées des méthodes de cultures.

Au congrès International de Gastroenterologie tenu à Bruxelles en 1935, dans une discussion sur l'étiologie des ulcères, Konjetzny me dit que les ulcères duodénaux et gastriques sont la conséquence d'un processus inflammatoire avec destruction de tissus qui commence à la surface de la membrane muqueuse et s'étend graduellement en profondeur. Orator et Metzler de même que Ruhl ont cru à la même hypothèse. Lebert et Cohn par des injections intraveineuses de pus à des animaux de laboratoire ont produit des lésions aiguës du duodénum et de l'estomac ajoutant ainsi à l'évidence que le pus produit l'ulcère. Letulle, Bezançon et Griffon par des injections de pneumocoques produisirent des ulcères d'estomac. Turck provoqua des ulcères ronds à l'estomac et au duodénum de chiens qu'il avait longtemps nourris aux colibacilles.

Rosnow confirme le fait qu'on peut produire l'ulcère d'estomac par des injections de streptocoques. Il croit que l'ulcère est dû à une infection localisée et à une digestion consécutive de la muqueuse stomacale. Il croit que la forme usuelle d'ulcère gastro-duodénal est due à une infection localisée, par des streptocoques qui ont une affinité élective spéciale pour la muqueuse de l'estomac et du duodénum.

A la suite de ces théories et ces expériences, Rosenow rapporte l'isolement de streptocoques prélevés d'ulcères et de foyers d'infections. Alors il fut en état d'établir à sa propre satisfaction, que le streptocoque injecté intraveineusement avait une affinité sélective pour l'estomac et le duodénum des animaux et qu'il pouvait dans bien des cas y produire des hémorragies et des ulcères.*

Meisser plus tard corrobora ces données de Rosenow par la production de foyers d'infection chronique chez des chiens, en dévitalisant quelques-unes de leurs dents et

* Cette prétention de Rosenow semble étrange, même contradictoire. D'après les affirmations qui précèdent, l'ulcère semble une lésion secondaire à un foyer d'infection aussi éloigné que la région périapicale des dents. Si le streptocoque s'est d'abord fixé là, d'où venait-il, et pourquoi se développer à l'apex des dents d'abord s'il a cette curieuse affinité sélective pour l'estomac et le duodénum? Aurait-il une autre faculté, celle de savoir qu'il faut s'entraîner quelque part avant d'assiéger une place? Si l'on se rappelle bien que 7 ou 8 autres bactériologistes cités ont obtenu les mêmes ulcères en se servant de pneumocoques, de colibacilles et d'autres microbes, il y aurait peut-être lieu de croire que ce ne sont pas les streptocoques qui ont la faculté spéciale de choisir le terrain ou s'implanter, mais bien plutôt le terrain lui-même qui par un processus encore mal défini, d'affaiblissement ou d'irritation, se met en état de leur offrir l'hospitalité. (Le traducteur).

en y injectant des streptocoques prélevés de dents de patients atteints d'ulcères d'estomac. Plusieurs de ces chiens développèrent des hémorragies et des ulcères de la muqueuse gastroduodénale. D'une série vaste et bien contrôlée d'apex de dents dévitalisées, Haden obtint 50 pour cent de cultures positives. De ces 46 pour cent de celles qui avaient donné des radiographies négatives donnèrent des cultures positives, et 63% des positives aux rayons X l'étaient à la culture. Une série contrôlée de dents vivantes ne donnèrent que 4.8% de cultures.

Les autres qui ont étudié les causes des ulcères d'estomac sont Mann et Williamson, Mathiews et Dragstedt, mais leurs méthodes ont différé de celles des autres chercheurs, car ils n'ont pas injecté de streptocoques. Pancréatite, cholécystite, hépatite, appendicite et còlite sont des conséquences reconnues de foyers d'infection buccale. De plus il ne faut pas oublier de mentionner le champ important et obscur des troubles fonctionnels nerveux.

Reste une question sans réponse encore; est-ce bien les foyers et les streptocoques qui sont la cause première de l'infection des voies digestives; ou bien comme Draper et ses associés l'ont observé, ne serait-ce pas plutôt cette sensibilité particulière qu'ont certaines personnes à développer des ulcères peptiques à cause d'anomalies anatomiques et physiologiques qui tendent à augmenter cette susceptibilité de l'individu? Bien plus Draper suppose que certaines relations anthropométriques aussi bien que certains facteurs psychologiques sont la caractéristique des porteurs d'ulcères et il appelle cela: "la constitution d'ulcéreux". Stenbuck aussi pense qu'il y a quelque chose de caractéristique dans l'apparence de ces patients. Il a trouvé que la face de ces individus est ordinairement maigre et teintée de couleurs fortement prononcées, d'apparence mal nourrie et énergique et reflète l'anxiété. D'autres observateurs croient que ces personnes ont une diathèse vasoneurotique qui conduit au développement de l'ulcère. Le principe du développement d'une maladie constitutionnelle ou localisée causée par un foyer primitif d'infection est un fait depuis longtemps établi. C'est aussi vrai de dire qu'une intoxication lente insidieuse de l'organisme peut être la conséquence d'une infection locale finalement reconnue par le dérangement fonctionnel de certains organes. A coup sûr, d'autres facteurs: l'hérédité, mauvaise hygiène personnelle, la nourriture, le boire, l'occupation, l'abus du tabac, peuvent jouer le rôle principal dans ces processus morbides. A part ces causes reconnues, un foyer d'infection chronique peut déterminer une maladie cardio-vasculaire, un trouble du rein, du rhumatisme, de l'arthritisme, l'ulcère peptique, une maladie de la bile ou de la vésicule, l'appendicite, la còlite, et un processus de dégénération de différents organes, de la myosite, des troubles nerveux et de la fibrose artériocapillaire.

Aujourd'hui je m'intéresse particulièrement aux manifestations secondaires des foyers d'infection dans les voies gastro-intestinales. Ce foyer aigu ou chronique peut apparaître dans n'importe quelle partie de l'organisme. Pratiquement c'est à la tête qu'on le trouve, probablement parce que la bouche et les voies respiratoires sont si souvent exposées à l'infection.

Un air chargé de microbes, des habitations insalubres, une mauvaise hygiène de la bouche, etc. jouent un rôle très important. Un excès de tissus lymphoïdes du nez et de la gorge des enfants peut offrir un terrain favorable à l'infection. Les amygdales, les tumeurs adénoïdes du naso-pharynx sont souvent le siège d'infections. Les cryptes amygdaliennes obstruées et infectées ou encore les cicatrices post-opératoires sont des sources communes de plusieurs maladies constitutionnelles. Les infections alvéolaires et surtout l'abcès chronique si curieusement imperceptible au patient sont une source fréquente de débilité générale et de troubles gastro-intestinaux. L'ancienne dentisterie caractérisée par l'emploi de couronnes d'or et de ponts fixes a été fréquemment la cause de foyers d'infection alvéolaire.

L'infection peut passer de la gorge et des sinus par d'autres voies muqueuses et atteindre l'oeil, l'oreille moyenne, ou les cellules du mastoïde, ou encore par voies

lymphatiques; les méninges ou les glandes du cou. La septicémie gonococcique et l'arthritisme en sont des exemples. Les stases urinaires dues à l'hypertrophie de la prostate, à la sténose des uretères, ou aux corps étrangers, etc, sont généralement associées au colibacille, au streptocoque, ou bacille pyocyanique, ou à une autre infection bacillaire et peut causer des désordres constitutionnels.

Cholécystite et l'angiocholite peuvent causer la bactériémie et la dégénérescence dans le coeur, les vaisseaux sanguins ou les reins. L'appendicite chronique peut être la source de malaises locaux et mettre la vie en danger par la formation d'un abcès dont la rupture peut entraîner une péritonite septique et quelquefois il peut aussi en résulter une dégénérescence du myocarde, des artères des reins et d'autres organes. Un foyer septique local des tissus sous muqueux ou sous cutanés à n'importe quel endroit peut causer un désordre général. Les voies intestinales peuvent être le champ d'une invasion bactérienne causée par la nourriture ou l'eau, comme dans la typhoïde, le choléra et la dysenterie.

Les nodules lymphatiques du mésentère peuvent devenir infectés par les microbes du pus de la bouche, de la gorge ou des sinus, mais plus vraisemblablement par un foyer situé dans les muqueuses intestinales. Ces nodules à leur tour peuvent devenir une source d'infection même après la destruction ou la disparition spontanée du foyer buccal primitif. On a vu opérer des colnectomies complètes dans des cas d'arthrite chronique, de goitre et de certaines formes de psychose parce que théoriquement l'agent infectieux de ces désordres avait sa source dans une infection primaire de la muqueuse du côlon et secondaire des nodules lymphatiques.

Une enquête subséquente dans quelques-uns de ces cas montra que le foyer primitif était dans la bouche et qu'on avait tenté de l'éliminer quelques années auparavant. Et avec quel succès, vous pouvez vous en douter. En fait comme je le dirai plus loin, après l'extraction des dents ou l'ablation des amygdales il y eut conflagration généralisée. Dans un individu le foyer d'une maladie peut donner lieu à un développement aigu, chez un autre il prendra la forme chronique. Ceci est également vrai de la forme chronique ou aiguë de l'infection gastro-intestinale.

Des observations cliniques et des expériences bactériologiques concomitantes prouvent apparemment cet avancé. Au moyen de cultures on a obtenu des streptocoques (viridans, mucosus, hémolyticus, et rheumaticus) de cryptes et d'abcès d'amygdales infectées, d'alvéoles dentaires et d'autres foyers d'infection; d'exsudat de sinusite, d'exsudat d'articulations dans des cas d'arthrite chronique ou aiguë, de prélèvements de muscles dans la myosite chronique, du sang dans les endocardites simples ou malignes; de nodules fibreux sous la gaine des tendons ou les aponévroses des muscles d'arthritiques et enfin de nodules hypertrophiés dans le voisinage des articulations infectées. Ces microbes ont dû changer leur caractéristique de culture et varier dans leur pathogénie en changeant de milieu de culture, la tension de l'oxygène et par des passages en série dans des animaux.

Il semble rationnel de déduire qu'il peut y avoir mutation de pathogénie spécifique du groupe pneumo-streptocoque dans un foyer d'infection. Une amygdalite streptococcique peut survenir avant ou pendant une fièvre rhumatismale. Souvent il y a une histoire de maux de gorge durant les semaines, les mois ou les années qui ont précédé. La même histoire se répète souvent dans beaucoup de cas d'arthrite chronique, de maladies des muscles ou du myocarde. Les streptocoques dans ce foyer latent peuvent avoir vu se modifier leur caractère spécifique de pathogénie à cause de propriétés biochimiques qui les environnent. Il est probable que l'apport de sang et la quantité d'oxygène de tissu localement infecté jouent un rôle important dans cette mutation. Avec une défense de l'organisme diminuée par le surmenage, l'extravagance, le refroidissement, une alimentation impropre ou insuffisante, des voisinages non hygiéniques, des lésions dues à des maladies antérieures, (cicatrice valvulaire), ou un traumatisme (articulation ou muscle), un individu peut souffrir d'arthrite aiguë ou

chronique, de myosite, d'endocardite ou de pneumonie simple ou maligne, selon la phase de mutation dans la pathogénie du groupe strepto-pneumocoque dans sa forme locale.

Les relations du foyer suspect avec une infection donnée semblent prouvées dans bien des cas par plusieurs facteurs. La suppression chirurgicale ou autre, de ce foyer d'infection amène quelquefois une guérison rapide. Plusieurs observateurs y compris les expérimentateurs ont noté une amélioration considérable tant générale que locale après une amygdalectomie, une ablation des adénoïdes, un drainage d'une vésicule infectée, une opération d'une appendicite chronique, l'ablation de dents cariées ou d'une infection dentaire. Chacun reconnaît l'amélioration qu'apporte à la respiration, la disparition d'adénoïdes ou d'amygdales obstruantes, à la digestion et conséquemment à la nutrition, la correction d'anomalies dentaires, le soulagement des maux locaux de l'appendicite et de la cholécystite. Mais en admettant cela, il semble évident que la disparition d'une infection continue du système est la raison principale d'une amélioration générale.

Appelton, dans son étude statistique basée sur une publication du Département de la Guerre, "Défauts trouvés chez les enrôlés", conclut qu'une infection chronique locale (céphalique) chez le mâle de dix-huit à trente ans inclusivement, n'est pas le seul ou principal facteur déterminant de certaines conditions qu'on rencontre de nos jours comme l'ulcère gastrique, l'appendicite, l'arthritisme, l'ostéite déformante, la myosite et les rhumatismes musculaires.

Revenant à notre sujet, les streptocoques dans un foyer d'infection acquièrent apparemment des propriétés spécifiques de pathogénie et en passant dans le courant sanguin se logent dans les artérioles et les capillaires des organes ou des tissus, sous forme de masses emboliques.

Il en résulte de petites hémorragies dans les valvules du coeur, les muscles ou les muqueuses de l'estomac, de la vésicule et des reins, etc. Comme résultat de l'embolisme et des hémorragies, il survient des changements caractéristiques dans les tissus infectés et ailleurs dans l'organisme.

Rosenow a montré chez des animaux de laboratoire, des hémorragies, des ulcérations subséquentes et des végétations massives caractérisées que contenaient des thromboses des valves du coeur, après une injection de bouillon de streptocoques obtenus du sang de patients atteints d'endocardite subaiguë ou streptocoques viridans; des hémorragies, des infiltrations leucocytaires subséquentes et de la dégénérescence des muscles volontaires et du myocarde; une hémorragie et une infection de la vésicule; une hémorragie des glomérules du rein avec hématurie cylindrurie, albuminurie.

On a observé la même marche pathologique dans des études cliniques et pathologiques de patients atteints d'endocardite maligne, de myosite, de cholécystite, d'ulcère d'estomac, etc. On a obtenu des cultures de cocci spécifiques de lésions similaires chez des animaux et des humains. La petite hémorragie embolique de la sous-muqueuse gastrique est suivie d'une anémie nécosante et d'une digestion subséquente de tissu mort. L'ulcère aigu peut saigner à menacer la vie ou il peut en résulter finalement un ulcère peptique typique. Dans la vésicule, le foyer embolique et l'hémorragie sont généralement situés à la base où vont aboutir des vaisseaux sanguins. La rupture de ce foyer sous-muqueux de la vésicule peut causer la cholécystite et le noyau d'une formation pierreuse.

Dans nos considérations sur les infections focales et l'anaphylaxie, il faut tenir compte de l'absorption de protéines émanées d'un foyer d'infection. Il peut en résulter une apparition évidente d'anaphylaxie sous forme d'urticaire et d'autres lésions de la peau, d'asthme. De tels patients se sont grandement bien trouvés d'avoir traité leurs dents infectées et leurs sinus. Un drainage biliaire, des injections d'histaminase et l'administration orale de tablettes de Torantil ont fait disparaître l'urticaire, l'asthme et les autres lésions dermatologiques.

En étudiant les résultats des foyers secondaires d'infection dans les différents tissus ou organes on a trouvé que dans certaines occasions ils étaient capables d'intensifier un désordre général. Les nodules lymphatiques infectés et situés à proximité d'un foyer d'infection peuvent devenir des foyers secondaires. Alors, dans un traitement de restauration, il sera nécessaire de tenir compte du côté nutrition des tissus tout en s'efforçant de rétablir la circulation et le plein contenu d'oxygène des tissus avant que l'on puisse détruire les micro-organismes infectieux et arrêter les changements anatomiques morbides. Répétons-le, le foyer d'infection est ordinairement dans la tête mais peut aussi être situé dans n'importe quel organe ou tissu. La bouche et les voies respiratoires sont constamment exposées à la contamination, spécialement chez les individus qui vivent au milieu de populations denses. Ces milieux malsains devraient être contrôlés autant que possible. L'hygiène individuelle devrait être de règle et les officiers de santé de la municipalité du comté ou de l'état, devraient être sévères à ce sujet. Les amygdales, les tumeurs adénoïdes et les dents cariées sont une menace pour la santé et la vie.

Il devrait être défendu d'enlever des amygdales et des dents sans discernement, car dans bien des cas cela peut provoquer une attaque ou réveiller un foyer latent et causer une réaction générale de frissons et de fièvre, etc. On devrait avoir en horreur l'ablation partielle des amygdales (amygdalotomie). C'est une dangereuse mesure de temporisation. Les cryptes qui restent, scellées par la cicatrice amènent des conditions aussi mauvaises ou pires qu'avant l'opération. Des dents cariées sont l'évidence d'une malpropreté personnelle inexcusable chez ceux qui autrement sont en santé. Des conditions générales dues à une diète insuffisante sont la cause, ou en tous cas sont intimement liées à la carie des dents, aux maladies des gencives, aux abcès alvéolaires, etc. Chez les enfants et chez les autres on devrait instituer une dentisterie préventive des foyers d'infection aussi bien que de leurs conséquences telles que: l'arthrite chronique, l'ulcère d'estomac, les maladies de la vésicule et du foie, l'appendicite, la colite, furonculose et débilité générale. L'ancienne dentisterie avait ses défauts techniques. L'usage sans discernement de couronnes d'or sur des dents à la pulpe infectée, a constitué dans bien des cas un barrage mécanique sur des foyers d'infections.

La cholécystite, surtout si elle est chronique, est une cause reconnue de maladies organiques et particulièrement de dégénérescence viscérales. Souvent même on y associe celle du myocarde. On a fréquemment noté une amélioration dans l'état du coeur après une cholécystectomie ou même après une cholécystotomie et un drainage. Le traitement chirurgical de la cholécystite et de l'angio-cholite est indiqué non seulement pour soulager une maladie locale, mais il est aussi important pour prévenir une intoxication lente du système et comme conséquence, la dégénération des viscères ou du myocarde. Négliger une opération d'appendicite, c'est s'exposer à une menace locale, à un dérangement des organes de la digestion, à une intoxication chronique du système des vaisseaux du coeur et à la dégénérescence d'autres organes.

Enfin la prévention des maladies par des foyers d'infection requiert tous les efforts possibles et tous les moyens connus pour maintenir les défenses naturelles de l'organisme, comme l'air pur, une bonne alimentation simple, la crainte du surmenage, des changements de température extrêmes, surtout ceux qui abaissent la température du corps durant une trop longue période à la fois.

Il y a des précautions essentielles à prendre avec ces patients qui manifestent des infections profondes spécialement ceux qui ont négligé un foyer primaire. Ils devraient subir des examens médicaux complets et répétés. On devrait chercher soigneusement à localiser ce foyer infectieux; ce qui n'est pas toujours facile. On ne devrait jamais rendre de décisions hâtives sur l'ablation des amygdales, des adénoïdes ou des dents. Une histoire complète du cas, une soigneuse exploration de la cavité abdominale, des repas d'épreuve, de la radioscopie, de la microscopie, des analyses chimiques et bactériologiques du nez, de la gorge et des selles, tout cela est nécessaire pour découvrir

un foyer d'infection, où qu'il soit, dans les voies gastro-intestinales. On doit faire un examen détaillé des voies génito-urinaires par l'exploration du bassin et l'examen des urines. Le massage de la prostate et des vésicules séminales peut déceler des gonocoques. Quelquefois on trouvera le foyer dans un endroit inusité. . . . Je me rappelle un patient atteint de fièvre rhumatismale et de pancardite à la suite de la suppuration d'un ongle de pied incarné. Du pus recueilli sous cet ongle on obtint de pures cultures de streptocoques spécifiques et le patient se remit promptement après l'ablation de cet ongle infecté.

Quand le médecin a complété son diagnostic et qu'il est certain d'avoir localisé le foyer d'infection tous ses efforts doivent tendre à le faire disparaître et avec lui les foyers secondaires et les nodules lymphatiques hypertrophiés car, il est probable que si on les tolère, ils peuvent comme foyers secondaires causer une infection généralisée. Dans la période d'inflammation aiguë, il peut être téméraire de tenter l'ablation des dents ou des amygdales.

Nous avons discuté des moyens prophylactiques, hygiéniques et chirurgicaux et c'est à dessein que nous avons évité de mentionner les sérums et les vaccins. Ces agents ont leur place en thérapeutique pourvu qu'ils soient indiqués. Les stock-vaccins sont recommandés et ont donné satisfaction dans bien des cas. Je préfère cependant l'autovaccin, spécialement dans cette forme de còlite qui a son foyer primitif dans le nasopharynx. Des rhumes répétés et fréquents tendent à ramener une nouvelle attaque de diarrhée de mucus ou de sang. Chez ces patients il est nécessaire de faire le prélèvement dans le nez, la gorge ou au moyen de sigmoidoscope dans le bas intestin.

Les patients qui ont de périodiques symptômes d'ulcères ont souvent bénéficié d'autovaccins faits de prélèvements du nasopharynx. Crohn et ses associés ont attiré l'attention sur le fait que des patients atteints d'ulcères peptiques peuvent déclancher de puissantes poussées de fièvre à l'occasion d'un rhume de gorge ou ce cerveau.

Ici, l'auteur rapporte 5 cas dont je résume l'histoire. Le premier souffrait de douleurs et de dérangements intestinaux considérables avec perte de sang. On a cru trouver la cause de son mal dans la présence de streptocoques blancs dans l'intestin et dans le naso-pharynx. Après quelques lavements médicamenteux, quelques injections d'extrait de foie, quelques petites transfusions et 34 injections d'autovaccin au staphylocoques blancs, le malade qui d'abord se montra réfractaire à tous ces traitements, descendit de 104 livres à 84 et finit par prendre le dessus si bien que 11 mois plus tard il avait atteint 137½ livres et semblait en parfaite santé.

Le second, un enfant de 6 ans, souffrait d'hémorragie rectale et avait été sujet à de fréquentes amygdalites. L'amygdalectomie fait tout rentrer dans l'ordre.

Le troisième souffrait de brûlements d'estomac depuis 10 ans. Il y avait lieu de croire à des ulcères, mais il n'en fut point trouvés. Comme la diète et les alcalis n'avaient pas obtenu plein succès et que le malade dépérissait on décida de l'opérer. On ne trouva pas d'ulcères, mais une duodénite. Mais pendant sa convalescence, le malade fut atteint de maux de dents. On lui en enleva deux et tout rentra dans l'ordre.

Le quatrième est une femme souffrant de cholécystite et de dyspeptie. On lui enleva toutes ses dents, curetta les zones infectées. Comme résultat: malaises, frissons, fièvre 104° à 105°, douleurs intestinales et còlite. Cependant tout rentra dans l'ordre, la cholécystite et la dyspeptie étaient disparues.

Le cinquième est un curieux cas d'extraction de plusieurs dents dévitalisées depuis plusieurs années. Mêmes résultats que dans le cas précédent avec douleurs au jointures. Cependant les cultures des racines furent toutes négatives. Le tout rentra dans l'ordre cependant qu'un doigt montrait encore l'effet de l'arthritisme.

Et l'auteur continue son exposé: Quoique les cas cités plus haut soient intéressants, ils n'apportent aucune preuve absolue que le foyer buccal d'infection en ait été le seul facteur étiologique.

On a cherché des avantages commerciaux en exploitant sans compter des sana-

toriums des villes d'eau et des institutions hydrothérapiques. Dans bien des cas de maladies fonctionnelles, l'influence des messages, de l'hydrothérapie, de l'exercice et des remèdes n'a abouti qu'à une restauration temporaire de la santé. Il sera toujours plus qu'inutile de traiter ces cas sans l'élimination du foyer. Cependant la négligence que l'on met dans l'ablation de ces foyers n'a d'autre résultat que la mutilation d'innombrables victimes. Même l'ablation de foyers primitifs a connu d'incalculables faillites. Le retour à la santé après la suppression d'une infection apparemment causale est souvent dû aux tentatives d'améliorations ou de restaurations de l'état physiologique des environs. Heureusement que la nature à sa manière de faire face aux injures comme le prouve le rétablissement de beaucoup de patients. Il ne faut pas ignorer non plus que des foyers peuvent être la conséquence d'écarts métaboliques ou autres, comme ils peuvent en être la cause. Il faut aussi mettre en évidence que supprimer à contre temps un foyer d'infection peut exalter les conditions présentes et mener à des résultats plus désastreux. Ceci est particulièrement vrai des interventions radicales dans les sinus quoiqu'on en puisse dire autant des autres champs opératoires.

Résumé — Il est important de reconnaître les relations des maladies gastro-intestinales avec des sources d'infection éloignées, telles que la cavité buccale et les voies respiratoires. Il ne faut pas ignorer que les foyers d'infection, spécialement les dentaires, peuvent causer une maladie dans presque tous les tissus du corps.

Chez les bien portants comme chez les malades, l'élimination de ces foyers doit s'entreprendre aussitôt que possible à moins de contre-indications générales.

Tous les cas n'en sont pas améliorés du coup. De fait, le rétablissement est souvent frustré par un état physiologique bouleversé. Des troubles fonctionnels peuvent disparaître sans l'ablation de la cause première, pourvu que la nature vienne à la rescousse du patient. Des exacerbations peuvent résulter d'une intervention chirurgicale; et le patient peut souffrir de complications tardives.

En analyse finale, il est important que l'interne décide s'il doit conseiller la suppression d'un foyer primitif à tel moment donné et le médecin doit garder une attitude conservatrice en face d'une extraction complète des dents, des amygdales, le drainage ou l'opération totale d'un sinus.

Traduction du Dr A. Thibaudeau, professeur titulaire de la chaire d'anatomie et de physiologie dentaires à l'Université de Montréal.

Conseils Pratiques

Gargarismes contre l'hypertrophie amygdalienne et les végétations adénoïdes.

a) Gargarisme iodé:

Iode	0 gr. 10
Iodure de Potassium	0 fr. 20
Glycérine	30 gr.
Eau	90 gr.

une cuillerée à café dans un verre d'eau. Il est très actif, mais son inconvénient est le goût désagréable qui rebute les enfants.

b) Gargarisme thymolé:

Thymol	0 gr. 45
Alcool à 90°	90 gr.

quelques gouttes dans un verre d'eau tiède. Ne doit pas être employé chez des enfants ne sachant pas encore se gargariser.

c) Gargarisme boraté:

Borate de soude	6 gr.
Essence de menthe	III gouttes
Glycérine } aa	60 gr.
Eau }	

une cuillerée à café dans un verre d'eau. La menthe ne sera utilisée que pour les grands enfants, elle ne plaît pas aux petits.

E. APPERT, *Le Monde Médical*, Paris.

Emploi de la dent à tube pour bridge.

a) Obturer le tube par de la porcelaine, de façon à transformer la dent en un bloc de porcelaine.

b) Pratiquer sur les faces distale et mésiale une légère encoche.

c) Meuler légèrement la face linguale de façon à ce que l'armature ne fasse pas saillie.

d) Meuler un collet à face vestibulaire.

De cette façon la porcelaine est seule en contact avec la gencive, et l'or visible est réduit au minimum. L'armature étant très fine doit être coulée en or très dur et très résistant.

LEO S. SEIDNER, de Chicago.



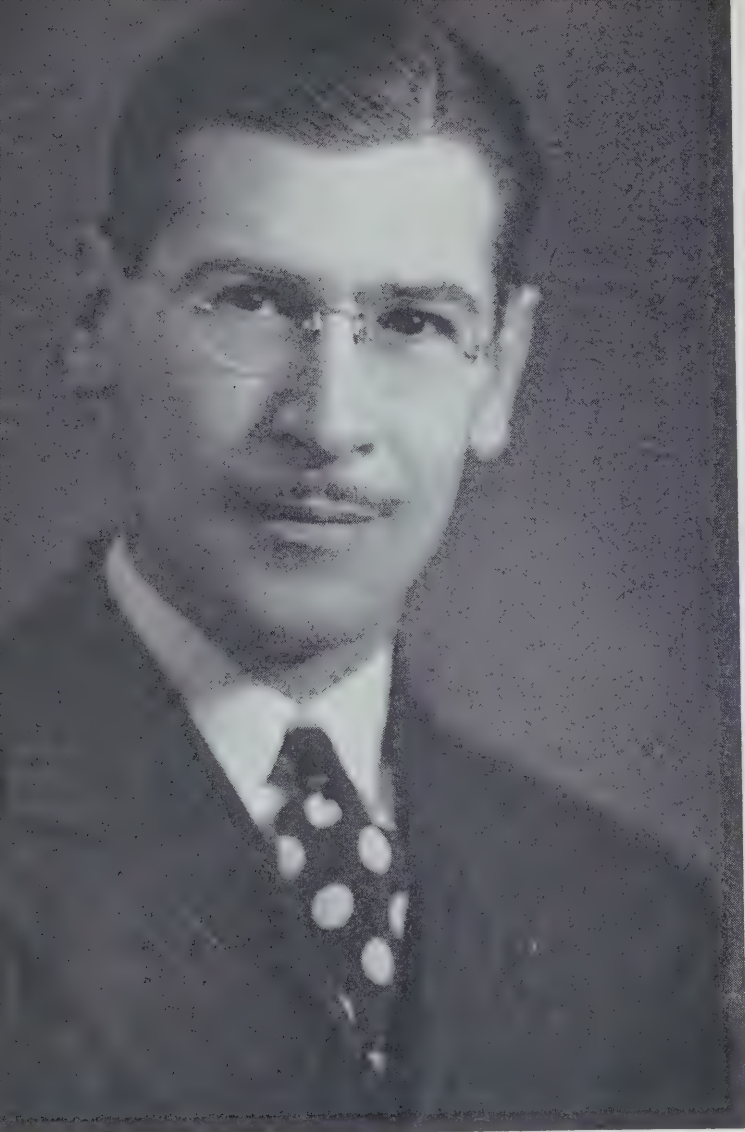
Courtesy of "The Beaver", Hudson's Bay Company

CAMPING

A snowhouse is the ideal shelter in the Arctic. Below: Camp is made on the edge of the woods in James Bay, and the guide chops enough wood for the night before darkness comes. Photos by J. G. Cormack and T. Thompson.

When two Eskimo chiefs meet to settle a dispute, they begin by having a laugh together. They have a comic entertainment of some kind. Then, after they have had some fun, they begin their discussion.

Laughter relaxes people—makes them more receptive and less tense. Salesmen should know this. So should Managing Directors. So should the League of Nations. What it needs most is a comedian.—Efficiency Magazine, per Medley.



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Dental Education in Canada During War Time*

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BEFORE dealing in particular with the specific subject of my paper this morning may I present briefly for your consideration for a few moments a composite picture of Canada in war time.

When war was declared on the Axis powers by England and France in September, 1939, the Dominion of Canada, in company with other sister members of the British Commonwealth of Nations, stood shoulder to shoulder with the forces of freedom and security against the striding, engulfing forces of tyranny and enslavement. By the common consent of a free people in a free parliament Canada chose to enter this conflict not for sentimental reasons alone but because, being a nation with world-wide interests and responsibilities, she could no longer remain a passive onlooker at the ruthless seizure and rape of the smaller and more helpless countries of Europe.

The realization of a common danger to our democratic and accepted way of life, to all those principles and rights we have learned to cherish, and to our very existence has drawn more closely together the

elements in the nations which are like-minded. Defence of Great Britain and the other democracies is not merely against the threat of totalitarianism. It is mainly a defence of the right to live decently, peacefully, and progressively according to the tenets of a free, democratic and Christian civilization. Such defence envisages a new international order in which co-operation and not antagonism is the key-note of harmony, happiness, and progress among the nations of the world.

The history of the last eighteen months has revealed, that under the emergency and stress of war conditions, the heterogeneous peoples of your northern neighbour, comprising those of English, Scotch, Irish and Welsh descent, the French-Canadians and those of European and Asiatic descent, have become welded into a unity of effort for victory for the common cause. Canada's peace-time problems of provincialism, racial prejudice, conflict of loyalty and religious difference have receded into the background and everywhere is presented a

EDITOR'S NOTE: Dr. Walsh, President-elect of the Canadian Dental Association, prepared this paper with only ten days notice and presented it before the American Association of Dental Schools, Saint Louis, Missouri, March 19, 1941, substituting for President Conant, of Harvard University, who had been sent to England by President Roosevelt.

united front to the enemy and a very evident determination to solve the most significant problem with which our people is now confronted.

Since the beginning of the War we have been mobilized on three fronts; the fighting front, the production front, and the financial front. I would like to give you a few facts of our achievement to date on each of these in turn.

In peace time Canada does not require a large standing army. You are as happily aware why this is so as we are. Today, we have on active service, 167,000 men. In addition there is a reserve of 100,000 men, which is being added to every month by 30,000 men called up under our national registration system. Approximately 60,000 men of our various services are overseas for the defence of England. Furthermore, there are other thousands garrisoned in the outposts of Iceland, the West Indies and Newfoundland. Still others of our forces are stationed on the east and west coasts of the Dominion for purposes of defence or are engaged in numerous protective services throughout the Country. All these soldiers of Empire have been trained and equipped according to the latest methods and standards of mechanized warfare. There are 55 Army training camps, 52 Air Schools and a number of Naval shore establishments in Canada at the present time.

Our Navy has been stepped up from a peace-time complement of 1,700 men and 15 vessels to its present strength of approximately 15,000 men and 160 ships. Engaged in convoy duties, in anti-submarine work, in patrolling and in other war-time services they are upholding the gallant British traditions of the Seven Seas.

The newest of our fighting arms to be established is the Royal Canadian Air Force. Its Squadrons are not only overseas on duty but in very active training

in Canada as well. Probably Canada's greatest contribution to the war effort in the air will be her help in forging that most formidable weapon for ultimate victory, the creation of the Commonwealth Air Training Plan. This joint enterprise of Canada, Britain, Australia and New Zealand is centred in many schools and on many flying fields requisitioned and being built throughout the country. We are paying our share of the millions of dollars expended on the scheme and many of our finest young men are enlisted in its present personnel of approximately 40,000. The Canadian Dental Corps provides dental service for the Army, Navy and the Air Force. This service is provided for men in the Air Force Schools, and Manning Depots and in Army camps and depots from coast to coast, as well as for men in naval establishments on both coasts. The military establishment calls for one dental officer for every 500 enlisted men. At the present there is a definite shortage of dentists in the Army and with the rapid weekly increase in Air Force enlistments, dental service will become a real problem. Approximately 450 dentists in Canada have enlisted in the Dental Corps. So much for a snapshot of our fighting front.

Labour and industry are the two great forces on the production front. Never has Canada witnessed such co-operation, speed and intensity of effort as is at present being put forth so loyally by these great and essential forces. The workers and industrialists are building new plants and converting factories to war-time needs so that a constant and ever-increasing stream of planes, ships, tanks, war vehicles, guns and shells can cope with the pressing necessity of keeping the fighting front adequately supplied with the tools of war.

It is on the financial front that every citizen finds an opportunity to serve our

war effort and to sacrifice in some degree so that final victory may be assured. Each man, woman, and even child can and does find some medium whereby some contribution may be made to sustain those who undertake a more active participation in the actual working services of the Canadian war effort. Through means of the Income Tax, National Defence Tax, Excess Profits Tax, War Savings Stamps, Certificates and Bonds, Auxiliary War Services Fund, Spitfire Fund and in many other ways everyone can give, lend and save so that the ends for which we are struggling may be well, truly and quickly concluded.

There is yet another way in which the Canadian people have mobilized themselves for war time measure. Through voluntary service in Red Cross activities, in the education and entertainment of men in the various forces and by means of co-operation in civilian protection corps duties many thousands of both men and women are contributing aid which helps them to realize and appreciate the part that each can play in a total war effort.

Most Canadians believe sincerely that democracy can best be promoted, maintained and enlarged by education. The majority of us now realize clearly that there may come a time in the history of a nation when belief in a tried and suitable way of life must be defended by force of arms. If this world struggle is a war to end international blackmail, to end international bad faith, and to make life safe again for the smaller nations and for the trusted principles of right-minded and decent-living peoples then, for the time being, we must accept the discipline and education of war-time conditions until later we are in a position to work out in more peaceful and progressive ways the promise of the democratic educational faith which lies within us. Canada is not fighting for the pre-war

status quo in which there was want in the midst of plenty, unemployment, and the fear of war. Rather our people are waging battle for the abolition of these scourges wherever they may be rampant. It is our fervent hope that the time is not too far distant when we may again enjoy the opportunities—the democratic privileges—of peaceful, constructive educational progress, with work and enough for all, and the continued aspirations and chance of each new generation to further social betterment.

With this brief summary of a general picture of Canada in war-time may I pass on to a consideration of the state of affairs in Canadian Dental Education at the present time.

Undergraduate teaching is very materially influenced by war-time conditions, and in order that this statement might be best supported and illustrated, let me ask you to transfer your thoughts to the Dental School of McGill University, Montreal, for one day. I hope to point out that as a result of active warfare being carried on, the teacher is faced with the added responsibility of linking up and adding to his subject material. This comes very natural because beginning with the 8 a.m. and ending with the midnight radio broadcast one's mind is never free from war atmosphere. A day with the students—the third year class is assembled in the lecture room at 8:30 a.m. and jaw fractures is the subject under consideration. Aetiological factors, such as machine gun or rifle bullets, shell or high explosives are given special consideration. Description with word abbreviations used in casualty clearing, base hospitals, etc., such as G.S.W. (gun shot wounds) or H.E. (high explosive), along with T & T (through and through), or E & E (entrance and exit), or E (entrance only) are used frequently. The H.E. wound or fracture which so often carries in clothing or dirt requires special

consideration because of its infective nature. The early use of antitetanic serum and radical removal of foreign bodies, e.g. explosive material with dirt or clothing is emphasized. Consider, therefore, the additional subject material necessary in this one small phase of that major and all important subject 'Oral Surgery' as a result of war conditions. From the administrative office shortly one hears the incoming first year class which is returning from the biological building where the physiologist has, in addition to his regular peacetime subject material, seen fit to add special lectures on transfusions of blood, shock, the effect of nerve damage and repair to such. At present the students dress in civilian clothes except for Army boots. Uniforms will be supplied by the Government in the near future. The clang, clang, clang of heavy Army boots is best described by the late Rudyard Kipling, "We-can-stick-out-'unger, thirst an' weariness, But not-not-not-not the chronic noise of 'em Boots-boots-boots-boots, moving 'up an' down again, an' ther's no discharge in the war!"

The second year having completed their orthodontia technique class leave shortly for an eleven o'clock lecture in pathology in the building of that name. War-time phases of this subject are continually being injected into the lectures, such as the influence of variations in air pressure on disease, divers' disease; such factors as are found in connection with aviation and explosion. Stab wounds, influence of foreign bodies on healing, gas bacillus common in war wounds, shock, etc.

The third and fourth years are at this time in the infirmary, which is located at the Montreal General Hospital, and is the outpatient department of the same. During the early part of the war the Canadian Dental Corps of Military District No. 4, made use of this infirmary while

more permanent quarters were being prepared. Dental officers and students were operating side by side; the former happy at the thought of being able to serve the troops in this terrible conflict, and the latter looking forward with pleasure in the anticipation of being accepted into the Corps. At 11 a.m. in the final year students leave the infirmary to go upstairs in the hospital to accompany the surgeon in charge of two surgical wards of forty beds while making daily rounds, then to receive bed-side clinics on cases selected as of peculiar interest. At 11:45 this same class prepares to leave for the medical building there to spend one hour with the Head of the Department of Medicine in the Faculty of Medicine and, as such, also in the Faculty of Dentistry. In addition to peace-time lectures, various aspects of medicine as applied to war-time conditions are dealt with in a special series of lectures,—such as gas poisoning, the medical problem of aviation, sanitation, and preventive medicine. Leaving the precincts of the dental educational class rooms to seek solace for the inner man, one observes daily the marching of well-trained soldiers back to their respective armouries, or truck loads of troops returning from special instruction in war-time manoeuvres. The main topic of conversation at luncheon is the latest war reports; how much longer can Mussolini fool his Italian people, the Ethiopians in the Italian African woodpile, the new method devised by American scientists of detecting and thus enabling the R.A.F. fighters to overcome night bombers, etc. Returning after lunch to the dental classes, we find the third and fourth years engaged in clinical dentistry with two members of the latter class each week attending the Hospital Tumour Clinic in charge of a senior member of the surgical staff. The second year students are in biological chemistry where, in addition to the regular peace-

time subject material, room has been made for a number of discussions of subjects related to the present war, namely,—lectures on blood-storage and transfusion problems. Following considerable research work on this all important phase of endeavour to save the lives of those brave soldiers by storing up blood plasma specially prepared for the instituting of blood banks, one of Canada's leading scientists in the field of bio-chemistry lost his life in the crash of a plane the destination of which was England to further study this phase. I refer, and on your behalf pay our respect to the late Sir Frederick Grant Banting, K.B.E., M.C., of the University of Toronto, internationally known for his wonderful contribution to the treatment of diabetes. Two additional lectures on oxygen want, aero-embolism and other aviation medicine problems,—two on chemical warfare and of course passing reference to the military or war economy importance of a number of other topics as they come up in the ordinary way.

The first year students are engaged in the study of histology. At 3:45 p.m. the first and second year classes prepare to join their respective companies of the McGill Reserve Training Battalion from 4-6 p.m. The Officers Training Corps is associated with the Active Army, while the M.R.T.B. is more of the militia unit, at present drilling in the McGill University Armoury, and later, with improved weather conditions, on the Campus. This instruction is compulsory for British subjects, only, and is given on three afternoons a week. The third and fourth years are exempt as it is deemed advisable by the Federal Government authorities that these, potentially, dental officers should devote all of their time to such preparation. The two senior years meet at 5 o'clock with members of the school staff on some phase of clinical dentistry. In the evening, this being the third and

fourth years the students are expected to attend a course of "Emergency Treatment for War Injuries," given by a senior surgeon and one who served for 47 months in the World War No. 1, and at the close of which was Lieut. Colonel of the Royal Canadian Army Medical Corps. A brief synopsis of this course is as follows:— The subject material has been selected, in part, as a result of four years experience in Base hospital and Casualty Clearing Station work in the last war, having in mind that when fighting became intense and battle casualties were numerous the regular work of the dental officer largely ceased and it was found that he could do, and frequently was used to advantage, as an assistant in the surgical division. The following is a brief summary: Classification and description of wounds and their implications: Treatment and dressing of wounds, including burns: Infections and their treatment, including chemo-therapy: Shock and its treatment: Antitetanic and other serums, anaphylaxis and desensitization: Control of haemorrhage: Gas warfare, effects and complications: Splints, their application and adjustment.

Dental undergraduate education under war conditions is quite different from that of peacetime. It is really an inspiration to observe the intense interest on the part of these young men and their keen desire to learn, to better prepare themselves for the serious problems which will confront a large percentage, many of whom will in all probability find their way, as Dental Corps officers, to the combatant areas which at the present might be such countries as Greece, Africa, Turkey, France or the British Isles. Their training days are long and strenuous but are accepted by these students as their contribution to the war effort without the least complaint or desire to evade. Who knows how many lives our dental officers will save through emergency treatment,

the amount of suffering by the wounded men they will relieve and as officers with high ideals, the amount of seed they will sow in the interests of democracy in the best sense of the word.

On September 10, 1939, Canada declared war on Germany and in full appreciation of the need of dental service for the Canadian Army, the Department of National Defence appointed, with the rank of Lieut.-Colonel, Professor Frank M. Lott, D.D.S., M.Sc. (Dent.) Ph.D., who had been a whole-time member of the staff of the Faculty of Dentistry of the University of Toronto. In a few months he was promoted to the rank of Colonel. Col. Lott had served with the First Divisional Signal Company during the last great War. This appointment was extremely popular with the dental profession, and Colonel Lott has since proved his worthiness for such a responsible post.

Every Dental School in Canada is feeling the effect of war conditions in relation to staff personnel. In the School with which I am associated 12 members of the staff are now active with the Canadian Army. Some are in England, and the remainder, for the most part, are in Canada. Dalhousie Dental School reports an enlistment of 20% of their teaching staff. This has necessitated a number of changes and readjustments. Every teacher who has enlisted has been notified that at the conclusion of the war, providing individual disability will not affect the efficiency of the teaching, every effort will be made to assure them of their re-appointment. What a reunion that will be, and having completed the job, what an opportunity to send the pre-war teaching team along afresh and with an impetus and enthusiasm to further the interests, not only of dentistry as a health profession, but also for liberty and democracy in its newest and best form.

The lack of education in the care of

the teeth and periodontal tissues on the part of a large proportion of Army recruits is clearly shown in the results of mouth examinations. The younger graduates are through their enlistments giving expression of their national, as well as professional loyalty. Seventy per cent of the eligible graduates this spring at one school anticipates being accepted into the Canadian Dental Corps in May. The situation, therefore, which is now presenting itself before the Board of Delegates of the Canadian Dental Association, is the almost certain shortage of dentists to supply the civilian population. In Western Canada members of the Dental Association are being asked to select towns to visit regularly. It is probable that a decrease in student enrolment will be effected this fall, and judging from the last war this condition will continue for the duration of the present war.

Dentists for public school clinics and for social welfare organizations, where dental service has been provided at little or no cost, are at present difficult to secure. It is, therefore, evident that the civilian population, especially the children of families of a low economic order are going to suffer severely from a shortage of dental operators during this war. This will, to a certain extent be relieved after the war, but never, in my humble opinion, in a way that it should until the State assumes responsibility for the dental health of those of low economic order. This is a national problem which will have to be faced in a new democracy program. Give American children clean, healthy mouths and there will be fewer mentally backward, and an improvement in the average physical, intellectual, and normal development, which obviously signifies a stronger Nation. Dean Bulyea of the School of Dentistry at Edmonton, Alberta, reports that out of 225 dentists in practice in that Province, over fifty have joined the Army. These Western

Canadians can always be counted upon in a crisis. It is to be hoped that no order will be issued by the Government of Canada which will prevent the enrolment of qualified new students and the continuance on the part of those already registered in the pursuance of their studies. The war situation is so acute and serious, however, that the Minister of Air Defence gave expression recently that, in his opinion, no exemptions should be asked for, and nothing should be allowed to stand in the way of encouraging and urging the youth of Canada to apply for admission into that all important modern combatant unit the "Royal Canadian Air Force." At the present, it is understood that students in addition to the 3-two hour periods of military training will be compelled to report for two weeks additional training, very likely during the latter part of May. There is no doubt that the time necessary for military training on the part of all young men will be very materially increased, shortly.

Almost overnight, industrial production organizations, mostly of a war nature, are springing up in towns bringing in from 1,000 to 7,000 additional population. These towns are writing in to ask for dentists and it is natural to assume that as the war is carried on, with possibly increased vigour, this demand will become more frequent. This whole question is being studied at the present time.

The problems not only of the future supply of dentists for civilian Canadians and the Army but, also, the rehabilitation of men now in the Corps are already being given much careful thought and study. Dean W. W. Woodbury of Dalhousie University Dental School, and President of the Canadian Dental Association, has already initiated the study of war-time problems, such as:—

- a) The guarding against a repetition of the action that flowed from a

sudden realization of the magnitude of the problem of supplying adequate dental service for the troops and pressed itself in a shortened inadequate course during the last war.

- b) Ways and means of meeting any demand on the part of the Government authorities for immediate increase of dental services, not realizing that the training of dentists is a relatively long term proposition and cannot be efficiently speeded up, as is possible with a good many other phases of the war effort.

Dean Mason of the University of Toronto reports that the war has completely stopped the enrolment of dental graduates from England, Australia and New Zealand. Last year the Toronto Dental School had 17 Australian graduates, one from England, and one from New Zealand in attendance in the final year for the doctorate degree. This School, with the largest enrolment in Canada, is not only doing excellent work in providing graduate dentists for the Canadian Army, but they have laid plans to hold a course of six months to train sixty enlisted men as dental technicians which latter are urgently needed at the present time.

This, in brief is the effect of war on Dental Education in Canada. Obviously, all matters relating to the subject of education are of vital importance, in determining the quality of our social and national life. In this favoured western world we are likely to accept, as a matter of course, the educational ideals in which we have been brought up, and to think little of that freedom of thought and expression which we regard as the right of all men. The fact remains however that in other lands this right is being challenged today in a most serious fashion. In totalitarian countries it is flatly denied; freedom of thought is openly and violently suppressed; and the

state undertakes, with the most ruthless disregard of individual rights and often by methods of shocking brutality, to control the thinking of its citizens in line with its own policies. At the present moment we are witnessing, not only the attempt of individual states and nations to plan the education of their own citizens on this principle, but the further attempt to force this same way of life upon others, including ourselves, and thus to destroy all that we have come to regard as of highest value in our common life.

We are engaged today in a struggle for the preservation of everything that makes life worth living. It is a time when we ought to be able to see more easily and more clearly than some of us do perhaps under more normal conditions, just what these values are, and how essential is their significance. And furthermore, as a privileged class of citizens, who have enjoyed the benefits of higher education, and are looked to in

some measure for guidance and leadership in the communities where we live, we must accept a large share of responsibility in the task of awakening the social conscience, and especially in giving to the youth of our generation a right idea in this matter of relative values.

While we therefore have a particular interest in one special section of the educational field, and are met here primarily to consider questions relating directly to our own profession, I wish to suggest,—indeed I wish to urge with all the emphasis that I can command, that not only here in this present convention but always, as we go about our daily work, we keep before our minds the larger vision of our responsibilities and our privileges, remembering that we are required not only to be masters of the technique of our own profession, but to be clear-headed and right-minded in our attitude to all that may be described as the common concern of humanity.

"God give us men. A time like this demands
Strong minds, great hearts, true faith and ready hands:
Men whom the lust of office does not kill;
Men whom the spoils of office cannot buy;
Men who possess opinions and a will;
Men who have honour—men who will not lie;
Men who can stand before a demagogue
And scorn his treacherous flatteries without winking;
Tall men sun-crowned, who live above the fog
In public duty, and in private thinking."

Conventions

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL
HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.
Secretary, A. D. Richardson, 1240 Union Avenue, Montreal.

AMERICAN ACADEMY OF PERIODONTOLOGY, HOUSTON, TEXAS, OCTOBER 23-25, 1941.

AMERICAN DENTAL ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

17TH ANNUAL SESSION OF AMERICAN DENTAL ASSISTANTS ASSOCIATION,
TEXAS STATE HOTEL, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

General Secretary, Aileen M. Ferguson, 709 Centre Street, Jamaica Plain, Mass.

Stabilized Impressions

by H. A. GILCHRIST, D.D.S., F.A.C.D., Edmonton, Alberta

STATISTICS are seldom interesting; nevertheless they are important as a comparative guide to progress. History tells us that in the year 1758 impressions were taken for full dentures by Philip Pfaff and that the material used was wax. But the year 1844 marked the dawning of a new era for Prosthetic Dentistry because it was in that year that plaster of Paris was first used in America as an impression material for full dentures. While plaster did not prove to be an ideal material for this purpose, without doubt it possessed for impression taking, qualities that made it much more accurate and dependable than wax. During the next decade further progress was recorded; another milestone in the impression technique was reached when in 1856 modeling compound was invented and used by Charles Stent, as an impression material. It did not, however, come into competition with plaster until the closed-mouth impression technique was introduced to the profession by the Greene Brothers about 1900.

Very soon after this the plaster and compound combination method was demonstrated by Hall. It still is extensively used in spite of the fact that it gives only a degree of contact and peripheral outline and cannot be confined to a definite area. In other words the plaster-wash is not completely under the operator's control. Furthermore it is not tissue displacing and therefore cannot give the degree of adaptation that is so necessary for stabilization in full dentures. This is partly true of other materials that are used as a "wash" in combination with a modeling compound tray. This compound-tray-wash technique is a vast im-

provement over the straight plaster method but it still leaves much to be desired.

As has been stated modeling compound was introduced as an impression material in 1856 and did not come into general use until about 1900. At that time the Greene Brothers brought to the attention of the profession the fact that here was an impression material that possessed many qualities which had long been overlooked. They had proven that because of these inherent qualities the surface of an impression could be reheated and readapted to the tissues so that it was possible to equalize the bearing on the hard and soft tissues at the stress at which the denture was to be worn; and that the correct peripheral outline could be definitely fixed enabling the tissues to move freely without atmospheric escape. In other words modeling compound was proven by the Greene Brothers to be the one impression material which could be controlled while in a plastic state.

Since that time modeling compound has been used by many with varying success, but it remained for Drs. Fournet and Tuller to devise a more definite technique whereby this material could be employed for impression taking to bring about a degree of denture stabilization hitherto unattained. The following is an interpretation of this technique.

The Examination

No engineer would undertake to build any structure without first making a complete survey of the available space, the existing conditions and the suitability of the foundation to support the structure, for the beauty, the usefulness and the permanence of the finished project are so

dependent on this survey. Much less should the dentist, who is striving to attain the same goal, undertake the placement of any dental restoration without first obtaining the same information.

With this in mind a complete examination of the mouth should be made in order that intelligent plans may be formulated, since in every mouth there are anatomical and biological factors that must be considered. The examination must, of necessity, be both visual and digital.

A visual examination will disclose the size and form of throat, ridges and vault, the amount of resorption, the health of tissues and the peripheral attachments. Another important disclosure is the amount of available space for denture bases.

With a digital examination the amount of available space may be further confirmed in that it shows the position of the following: the pear-shaped bodies, the external oblique ridge, the mylohyoid ridge, the attachments of all muscles and ligaments that would contact the periphery of the dentures. The digital examination also locates the hard areas and discloses the density of the tissues covering the jaw.

After the conditions that exist on the surface of the soft tissues of the oral cavity have been determined by the visual and digital examinations, the survey should be completed by ascertaining the health and density of the underlying bony structure with the help of the x-ray. No dental examination of the mouth is complete without its aid.

The Impression

All removable dental restorations are fabricated outside the mouth by the indirect method. That is to say these appliances are all constructed over casts that have been made from measurements, called impressions. These measurements should embrace a definite area and only include those tissues on which the appli-

ances are to rest, for peripheral outline and peripheral seal are requisites of denture stability. The success of a restoration depends largely on the accuracy of these measurements and since the impression is the positive of the finished denture base, it stands to reason that a denture will have no better retention or stability than its impression.

The Impression Material

In order to get an accurate impression it is necessary to employ a material that is at all times absolutely under the operator's control and one that distributes pressure equally over the whole area on which the denture base rests. Any procedure that is completed simply with one application does not insure close contact with the tissues over the whole surface. It should be possible with any material used in full denture impressions to resoften and reconform it to the tissues so that closer adaptation may be obtained and thus increase the degree of adhesion by contact. Modeling compound fulfils these requirements better than any other impression material available at present.

To carry the compound into correct relation with the tissues an individual tray should be constructed for this purpose, and then trimmed to meet the outline demands. Vulcanite or acrylic trays are acceptable.

THE TECHNIQUE

Preliminary Lower Tray

After the survey has been accomplished a stock tray should be selected which completely covers the area that has been tentatively determined to be included in the denture base. For the lower jaw it will be necessary to bend the distal ends of the tray so that they will fit against the ramus and cover the pear-shaped bodies. The disto-buccal angles of the tray should also be turned up, so that they will carry the impression material well into that area which is controlled by

the distal border of the buccinator muscle and mesial border of the masseter muscle.

Lower Preliminary Impression

Take preliminary impression in a modeling compound which softens at a reasonably high temperature of about 140° F. A compound with a fairly high viscosity displaces tissues which should be displaced and condenses tissues which should be condensed. Keep in mind that a greater degree of stability will be attained by having the denture base closely adapted to the bony supporting tissues. In the tray place plenty of compound so that there will be sufficient material to fill the tissue folds beyond the tray border. This is imperative especially in those cases in which the stock tray does not completely cover the desired areas. This should not, in any sense of the word, be a "snap" impression. The same skill should be expended in taking a preliminary impression as is exercised in any other part of the procedure, for the success of the finished denture depends on the accuracy of the preliminary impression.

Lower Vulcanite Tray

To construct the lower vulcanite or acrylic tray, first remove all undercuts from the preliminary impression. Then pour the cast in some quick setting stone, separate and mark a tentative outline on the cast for a vulcanite tray. This outline includes practically all of the tissue surface covered by the preliminary impression, for at this time it is not definitely known just how large an area it will be necessary to include in the finished denture base in order to get stability.

The pattern for the tray is made with two layers of pink wax, with the wax outline for a handle placed conveniently in the anterior part of the tray. Duplicate the pattern in vulcanite. Trim to original form. Place this tray in the mouth and note relation of its border to surrounding tissue. Undoubtedly the tray at all points

will extend beyond the area of tolerance on the buccal, labial and lingual as well as across the distal. Remove the tray and trim with arbor band, a small portion of the border at a time, and by trial and error, reduce carefully the peripheral outline until it cannot be displaced by any movement of the cheek, lip, tongue, muscles or attachments. Trim the distal ends of the tray so it cannot be moved when the patient opens the mouth widely.

Lower Final Impression

Soften some impression compound (Dresch) which becomes plastic at 130° F. Fill the tray with this compound, making sure that all the borders of the tray are covered with the material. Applying dry heat to the compound after it is removed from the water, insures its adhesion to the tray. Hold the compound while in the tray, in the water until it is softened uniformly throughout. After centering the tray over the ridge, proceed to take the impression. Remove the impression before the compound has hardened, inspect, soften again and apply the impression to the ridge with a downward and backward motion. Repeat until the tray is firmly seated. On the last application, while holding the impression firmly in position and while the compound is still soft, have the patient lift the tip of the tongue forcibly to the vault, then extend the tongue from the mouth contacting the upper lip. Chill the impression and then remove it from the mouth. Note whether or not the outline of the lingual border is rounded smoothly by tissue contact. If not, pencil on compound by dry heat in those areas that are not tissue moulded. Replace impression in the mouth and have the patient go through the same tongue movements.

Muscle Moulding

Soften the buccal and labial periphery of the impression, a section at a time, (not more than $\frac{3}{4}$ of an inch) with the heat of a mouth blow-pipe. Then muscle

mould by holding tray firmly in position in the mouth with one hand and with the other massage the cheek and lips over the softened compound area, forcing the excess material down on to the tray. Mould the lingual border by softening the incisal and bicuspid areas. Seat in the mouth, hold tray and have patient raise the tip of the tongue forcibly to the vault. Repeat until the impression does not lift with this movement of the tongue. To mould the rest of the lingual border, one side at a time, soften and have the patient contact the upper lip with the tip of the tongue. Again soften the center of this area, one side at a time and have the patient carry the tip of the tongue to the opposite cheek.

To mould the distal borders, soften both at same time. Place in the mouth and hold firmly while the patient moves the jaw from side to side and opens mouth widely. If, during the muscle moulding, the vulcanite tray shows through the compound at any point, the vulcanite should be trimmed away, more compound added, and that portion of the border remoulded.

Suggestions

This method of impression taking, if carefully carried out, will insure a comfortable lower denture base, that will stay in place during all jaw and muscle movements and will have plenty of lateral and vertical stability.

There will be no question about the horizontal stability provided the tray is as closely adapted to the bony outline of the jaw as the compound will permit. If the vertical stability is not satisfactory, the peripheral outline should be corrected by adding compound and remoulding in those areas which do not show definite tissue markings. Often the lack of vertical stability lies in not carrying sufficiently far the disto-buccal angles, as well as not having enough depth to the lingual border of the impression in the bicuspid

region. It is absolutely essential to have the peripheral border of the whole impression well rounded and of uniform thickness, as knife-edge borders decrease the possibility of securing peripheral seal. The stone cast should record the peripheral outline very faithfully so that it can be duplicated in the finished denture.

Upper Preliminary Impression

Select a stock tray that fits the ridges and vault reasonably close, and extends beyond both the tuberosities and the junction of the hard with the soft palate. Fill the tray with soft displacing compound (S. S. W. Black Tray Compound) and take a careful impression.

Upper Vulcanite Tray

In constructing the vulcanite or acrylic tray for the upper, remove all undercuts on the buccal and labial of the preliminary impression. Scrape relief in the center of the vault to correspond to the hard area. Make a cast in quick setting stone, and after separating, mark outline for tray on cast, being careful to extend the vault portion about 3 mm. beyond the junction of the hard with the soft palate. Adapt two layers of pink wax inside this outline and place wax pattern for handle at the center of the tray on the anterior part of the ridge at the crest. Construct the tray of base rubber and after vulcanization, trim to original outline of wax pattern. Smooth and polish on the lingual side. Check the tray in the mouth. Then trim the periphery, a section at a time, until it does not interfere with free muscle movement. The tray in vault portion should extend 3 or 4 mm. beyond the junction of the hard with the soft palate so that later the impression material will be carried up in close contact with the tissues in that area.

Upper Final Impression

Soften impression compound (Dresch) in water heated at 130° F. Remove compound from water and dry heat the under

surface so that it will adhere to the dry tray. Place the softened compound in this tray, making sure that the periphery is all covered with the material. Hold tray and compound in the water at 135° F. until the compound is softened uniformly throughout. Place impression in the mouth, center, carry up to position and then remove before the compound has hardened. This is to determine whether or not the tray is properly centered. Resoften in hot water, return to mouth, center and carry up to place. Again remove, resoften and reseat in mouth with considerable force. Chill and remove from the mouth. Then with a sharp knife remove all compound on the buccal and labial periphery right down to the border of the tray. Examine the hard areas digitally in the vault of the mouth and outline their position with a soft lead pencil on the impression. Soften the compound inside these outlined areas carefully, with the heat from a mouth blow-pipe. Temper by dipping the impression quickly in hot water and seat with considerable force in the mouth. Repeat the heating, tempering and seating processes three or more times, the number depending on the degree of hardness in the center of the vault. At this time there should be horizontal or lateral stability due to the close adaptation of the material to the vault. Good adhesion can be expected too, and this will give a measure of vertical stability. If not satisfactory in every respect, repeat the above process until the desired result is attained.

Next correct the buccal and labial peripheral outline, a section at a time, by pencilling on dry-heated impression compound. Temper, seat impression in the mouth and pack the soft compound well up in to the buccal and labial folds. When this has been accomplished, proceed to muscle mould the peripheral outline by softening the compound, a sec-

tion at a time, with the flame of a mouth blow-pipe. Temper, seat in the mouth, and while holding the impression firmly with the index finger, ask the patient to draw down the muscles tightly with a sucking motion. In order to get the correct markings it may be necessary to add compound in certain areas and to remove some in others. In either case reheat and remould. Be sure that there is plenty of compound to form a roll in the distobuccal angle of the impression. Soften the compound at the ends of the crest of the ridge on the impression, seat in the mouth, hold firmly and ask the patient to open the mouth as widely as possible. Remove the impression, locate the junction of the hard with the soft palate, dry the throat with absorbent cotton, and with indelible pencil mark outline of junction.

To locate this junction the operator should close the patient's nostrils with the thumb and finger of the left hand, and instruct the patient to blow into the nose while the mouth is open. This brings down the curtain of the soft palate and discloses the junction which then can be quickly outlined with indelible pencil. Before the patient closes the mouth seat the impression, and if the material is in contact with the tissues, the indelible pencil mark will plainly be shown on the compound. If not clearly outlined, pencil on more compound in this area and readapt until the mark is visible.

Post-damming is absolutely necessary no matter how much retention there is in the impression. To accomplish this, place soft carding wax over the indelible mark, following it carefully. Soften with the flame of the mouth blow-pipe, seat in the mouth firmly, remove and trim to a definite outline, about 2 mm. on either side of the line. Again soften and place firmly in the mouth. This completes the impression.

Amalgam Restorations in Oral Health Service*

by ARNE F. ROMNES, D.D.S., M.S.D., Chicago, Illinois

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THE greatest field of service for the general practitioner of dentistry is in the application of preventive measures which are recognized as effective. A truly magnificent service has been rendered by the dentist who pilots his patients safely through the period of greatest susceptibility to dental caries to middle age without the loss of a tooth or the vitality of a pulp. The fact remains, however, that too many dentists are content to continue a discouraging reparative or prosthetic practice, without ever developing the possibilities of a more effective and satisfactory program for a larger portion of their clientele.

The increasing importance of health service in dentistry brings to the foreground the necessity for emphasis on the biological and scientific aspects of preventive and restorative measures. The appreciation of the value of such measures and their application to practical situations, will not be accomplished on a large scale until a greater number of the profession progress with the ascendancy of the concept that dental practice is primarily oral health service.

All of us will agree that the best means of controlling dental disease today consists of early and frequent observation by the dentist, education of the patient in recognized preventive measures, and adequate dental care. The responsibility for a successful program depends not only upon the co-operation of the patient, but it falls heavily upon the general practitioner. He should continually emphasize

the value of proper diet and local corrective measures in the prevention of dental caries, and educate his patients in the effective measures for preventing diseases of the gingivae. Since a failure in patient co-operation often precludes the possibility that dental caries and gingival disease will be prevented, the dentist should possess the ability to render a successful corrective treatment.

There is much clinical and scientific evidence to support the fact that caries activity can be decreased by a reduction of the carbohydrate intake. The local effect of "sweets" on the development of dental caries suggests not only their elimination from the diet, as nearly as possible, but also their removal by prophylactic means immediately after eating. Silver nitrate has proven to be of specific value for immunizing incipient caries. An adequate program of conservation should therefore begin with the small child, and frequent observation should be the rule during the period of greatest susceptibility to caries. The proximal surfaces of permanent teeth should be treated with silver nitrate as soon as they erupt. Certainly no proximal restoration should be placed without taking advantage of immunizing an adjacent etched proximal surface, or a surface which appears unaffected by caries. Pit and fissure cavities should be mechanically treated by restoration, and the smooth surface cavities prepared with full cognizance of the rules of extension for prevention, particularly in the young permanent

* Read before the Academy of Dentistry, Toronto, March 13, 1941.

teeth. Every effort should be made to prevent a recurrence of caries and to protect the soft tissues from injury through skilful operating and by using good judgment in the selection and manipulation of the restorative material.

Recent surveys estimate that 70% to 75% of all restorations in teeth are made of amalgam. Regardless, many good operators consider amalgam second only to gold foil as a restorative material; in fact, they believe amalgam superior to the cast gold inlay. Whether this is true is relatively unimportant, since no one of the restorative materials can be considered ideal for every condition. It can be said, however, that amalgam bids fair for recognition as one of the best materials in view of its enduring restorative qualities. Since amalgam has demonstrated its excellence as a "tooth saving" material, the time has come when dentists should take cognizance of the fact that amalgam is not an inferior material, but that it is one of the highest quality if carefully used. It is not my purpose to champion amalgam over and above the other restorative materials, but its extensive use justifies the presumption that every effort should be made to understand more fully its manipulative properties.

Generally speaking, the majority of dentists are far more interested in selecting a "fool proof" alloy than they are in utilizing a sound technique for its successful manipulation. There are over fifty available alloys which at present meet the American Dental Association's specification No. 1. In order to obtain standardization, it might be better if the manufacturer would produce an alloy which would meet the specifications of a successful manipulative technique; thereby assuming the responsibility for the amalgam, rather than for the alloy. Amalgam is extremely sensitive to manipulative abuse; in fact it is more difficult,

day in and day out, to produce uniformly good amalgam fillings than any of the other materials used by the dentist for restorative purposes. It becomes important, then, to understand the variables which are under the control of the operator and which so greatly influence the result.

CAVITY PREPARATION

There is no single step in the technique more important than that of cavity preparation. Fundamental principles of cavity preparation should be evolved from an understanding of the pathology of dental caries and a complete knowledge of the anatomy and histology of the teeth. Variations in cavity preparation for amalgam insertion should be based upon the deficiencies exhibited by the physical properties of the material. The most important modification from cavities prepared for gold restorations is the need for increased width and depth to insure adequate bulk to compensate for the low tensile strength and friability of amalgam.

The outline form of pit and fissure cavities should be extended to allow for proper finishing of the margins and the fissures sufficiently included to prevent a recurrence of caries. The occlusal outline of a proximal occlusal cavity should be wider for amalgam to overcome its low tensile strength. The occlusal dovetail is a chief source of retention; it should therefore be made wider and possibly deeper than for gold restorations. The lesser crushing strength of amalgam requires that its buccal and lingual occlusal outline be prepared to meet the proximal surface at a right angle, to avoid as nearly as possible an acute angle at this point. There is little excuse for recurrence of caries about the proximal margins of amalgam restorations if the cavities are properly extended for prevention. This principle applies with equal force to amalgam as to gold restorations and is applicable to all classes of cavities.

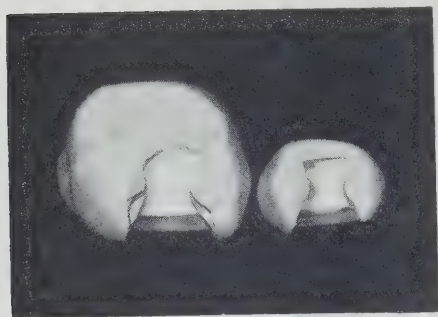


Figure 1.

Models showing occlusal outline form of class II cavities for amalgam. The prepared outline in the molar is permissible for gold restorations. The outline for amalgam is indicated by the pencilled line. Owing to the weak edge strength of amalgam, the occlusal outline should join the proximal outline as nearly at a right angle as possible.

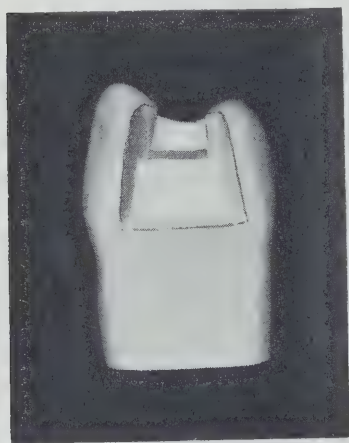


Figure 2.

Model showing resistance and retention forms of a proximal occlusal preparation. Note the definite retention grooves.

In gingival third cavities maximum extension should generally be employed since caries activity is usually high in persons presenting themselves with this type of cavity.

Adequate retention must be prepared to compensate for the dimensional and flow changes of the restoration, while

good resistance form prevents dislodgment. Proximal retention should be increased by means of grooves, prepared at the expense of the buccal and lingual axial walls. The axio pulpal line angle should be bevelled or rounded to guard against fracture at this point and to provide additional bulk. In utilizing natural undercuts for the purpose of retention, care should be given to protect frail, unsupported enamel walls against fracture due to masticatory stress. Whenever necessary, these frail walls should be cut down strongly and protected by an adequate bulk of amalgam.

The enamel wall must be so prepared that the angle it forms with the surface is as nearly at a right angle as the direction of the enamel rods will permit. Enamel walls are stronger near the grooves, however the rods change direction acutely at the cusps and ridges. The planning of the enamel wall should therefore be in the direction of the enamel rods and one must be certain that no rods are left unsupported. Obviously, the great brittleness of amalgam precludes the use of a cavo-surface bevel. The finer details of the cavity should always, where possible, be completed in a dry field. Fig. 1. Fig. 2.

MATRICES

Unquestionably, many amalgam failures can be directly attributed to a failure to apply a suitable matrix. A carefully adjusted matrix is so essential to the proper condensation of amalgam that no effort should be spared to secure the best results with the least discomfort to the patient. The Black, Harper, Hollenback, and Ivory methods are in common use, while, the devices of many others are helpful in connection with the application of matrices. Irrespective of the type used, a good matrix should

- (1) be readily contoured, and supply the equivalent to the lost wall;

- (2) allow for heavy packing pressure without any movement during adaptation and condensation of the amalgam;
- (3) prevent an excess of amalgam from being packed beyond the gingival margin;
- (4) permit removal without disturbing the marginal ridge or proximal contour, and
- (5) allow for restoration of the desired contact point.

The Ivory matrix is perhaps most widely used throughout the dental profession. The matrix is inadequate if it is merely tightened by the adjustable screw. On the other hand, a suitable matrix will result if a gingival wedge is used and the embrasures are supported by modeling compound. Fig. 3. Fig. 4.

PHYSICAL CHARACTERISTICS

The limits of composition of an amalgam alloy according to the American Dental Association's specification No. 1 are as follows:

Silver	65% minimum
Copper	6% maximum
Zinc	2% maximum
Tin	25% minimum

High silver content alloys should always be used since it has been shown that the low silver content alloys (popular at one time) invariably shrink and produce low strength and high flow values. Silver increases the edge strength, controls flow, and hastens setting. The tin content of the alloy is somewhat critical. It is chiefly used because of its strong affinity for mercury and because of its ability to decrease the amalgamation time in combination with silver. Tin also controls excessive expansion under ordinary methods of manipulation. Copper is used to replace silver in small amounts to increase the edge strength and decrease flow. It must be used sparingly, however, because of its expanding element. Zinc in an alloy is used to aid the manufacturer in preventing metallic

oxides during the process of melting and pouring the ingot. Zinc is known to possess a scavenger action, however, non-zinc alloys exhibit physical properties after amalgamation which are similar in all important respects to those containing zinc.

The crushing strength is increased in proportion to a decrease in the mercury content of the amalgam. Clinically, the greater the packing pressure, the greater

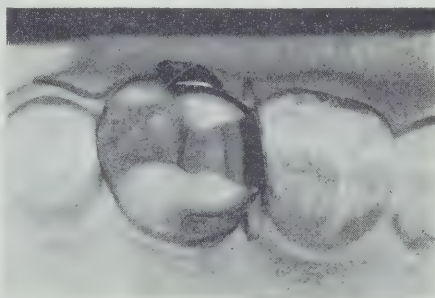


Figure 3.

Three-surface cavity in molar in which gutta percha is packed in the mesio-occlusal while restoration is made in the distal section. At a subsequent appointment the mesial cavity is restored. This allows for proper adjustment of contact points.



Figure 4.

Copper bands are not recommended for matrices, except where contact has been lost through extraction and where restoration of cusps is necessary. Root post cemented to provide additional retention. Gutta percha is packed in space to prevent movement during condensation.

will be the amount of mercury removed and consequently the greater will be the crushing strength. It is important that the condensation of the restoration be accomplished as rapidly as possible since crystallization is, in general, a rapid process. A crepitus in the mass usually indicates the beginning of crystallization, after which it is physically impossible to remove the free mercury and difficulty is encountered in securing good adaptation.

The dimensional change of amalgam has received much careful study. This property is known to be greatly influenced by clinical manipulation and is a variable which is definitely under the control of the operator. An initial contraction always occurs but its degree and duration may be varied. This is caused by the fact that the alloy filings go into solution with the mercury. As trituration or "stirring" is increased the initial contraction becomes greater and persists for a longer time. With a greater pestle pressure the particles will be broken up to a certain extent which further tends to increase the solution. According to Skinner², "any manipulation which increases the amount of solution will increase the amount of initial contraction." Conversely, an expanding amalgam of high flow results from a lack of sufficient trituration.

Expansion is not an unfavourable factor, yet the thermal linear expansion of amalgam is greater than that of tooth structure. In order to compensate for the different thermal expansions of the two substances during a temperature change in the mouth, a slight expansion is desirable during the initial set. Excessive expansion has been well regulated in the recent manufactured products, however, if the excess of mercury is not eliminated severe pain, as well as volume change, will result. This is particularly evident in gingival restorations.

TECHNIQUE

Space does not allow for a discussion of the various amalgam techniques. Some of them are scientifically unsound, and others are excellent. Obviously, the removal of excess mercury is necessary to provide maximum strength and minimum flow. The technique herein outlined will take into account the variables mentioned, and will follow, in the main, the recommendations of G. V. Black with the significant improvements which have since followed.

The directions of the manufacturer should be meticulously followed relative to the alloy; mercury ratio, trituration, and the detailed instructions for the remaining steps in the preparation of the amalgam. The average alloy; mercury ratio is perhaps 5:8 by weight. The ratio is not critical provided enough mercury is used and the excess is removed during the condensing procedure. All dentists, however, should possess some means of securing the proper proportion either by the use of scales, or by the new and convenient method of obtaining the alloy in hermetically sealed envelopes accompanied by a properly balanced mercury dispenser. Fig. 5.

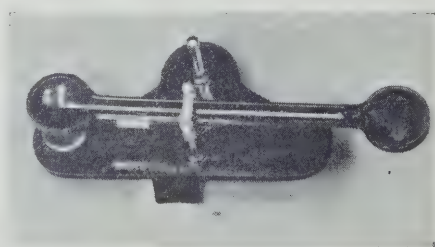


Figure 5.
One of several types of scales for proportioning the alloy : mercury ratio.

Trituration should be timed and the revolutions counted using the pestle pressure recommended by the manufacturer. A pen grasp is most suitable since too

much pressure may produce contraction. In using the hand operated mortar and pestle it is difficult to gauge the accurate pestle pressure. There is available a pressure regulated mortar and pestle. Its use is highly recommended since it eliminates this variation while standardization is further accomplished by timing and counting the number of revolutions of the pestle. Recently, a successful mechanical amalgamator has appeared on the market. A timer accompanies the amalgamator and trituration is accomplished by an eccentric stroke. If the manufacturer will indicate the correct alloy, mercury ratio and the trituration time, the dentist may expect a uniform and properly triturated amalgam.

In those instances where mulling is advocated by the manufacturer, it should be done with a rubber finger stall and rubber dam rather than in the palm of the hand. There is evidence (as yet unpublished) that the salts formed from the impurities in the palm of the hand contribute to unfavourable dimensional changes in the resulting amalgam. Since this appears true, the mixing should either be completed in the mortar or the above mentioned precaution observed. It should be remembered that under-mixing produces expansion while over-mixing results in contraction.

At no stage of the manipulation should additional mercury be added once trituration is started as this reduces crushing strength and causes unfavourable volume changes in the restoration. Moreover, no mercury should be expressed during the mulling process since it may cause the amalgam to set partially before condensation is completed.

Following trituration, the mass should be rolled into a cylinder and cut crosswise into small pieces prior to condensation. Everything should be in readiness so that condensation may progress in as short a time as possible. The field and

cavity must be perfectly dry. It has been shown that the effect of saliva on amalgam results in a loss of crushing strength causing brittleness³, interferes with the cohesion of the mass, and causes corrosion of the amalgam. The rubber dam is still the best method for obtaining a dry field.

Proper condensers are important relative to their size and shape. The larger the condenser face the greater is the pressure required for thorough condensation. Heavy packing pressures must be used, however, care should be taken in the use of small instruments since they may penetrate the amalgam previously condensed, thus disturbing adaptation. Most cavities present acute angles in the dentine as well as in their marginal area. Triangular condensers should therefore be used to properly condense the amalgam in these angles. Sweeney⁴ has designed a set of condensers which fit the cavity particularly well and their use is strongly advocated. Serrations on the condensing face of instruments are valuable as amalgam carriers; however, there appears to be no further advantage. Fig. 6.

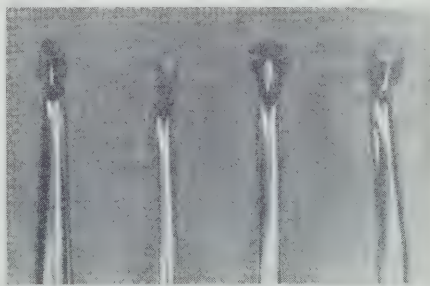


Figure 6.

Smooth faced condensers. Note the triangular condenser, valuable in condensation of acute angles.

The first piece of amalgam should be squeezed in a napkin between the thumb and forefinger for the purpose of removing some of the excess mercury. One

should first restore the proximal portion of the prepared cavity, starting with a small quantity of amalgam, using a large condenser to grasp the amalgam and, with all the power of the hand and with a vibrating motion, condensing this first quantity into the gingival part of the cavity. A smaller condenser should then be used, starting in the centre and stepping toward the cavity walls. This carries mercury toward the walls, at which time it should be expelled from the cavity. More mercury should be expressed from the second piece of amalgam before insertion into the cavity and the described procedure repeated. As much mercury as possible should be expressed by heavy and uniform condensing pressure, however, each portion of amalgam should be packed against a slight surface of mercury to insure union.

Particular care should be given to the condensation about the walls and into the angles, being certain that no mercury-rich amalgam remains. More and more mercury should be removed by pinching between the thumb and forefinger before it is inserted into the cavity. The last pieces of amalgam should be wrung through a clean napkin or chamois, and with heavy vibrating pressure adapted to overfill the prepared cavity. This tends to blot up the last traces of free mercury

and allows a sufficient excess of amalgam for the convenience of contouring. Fig. 7.

The mechanical method of condensation advocated by J. T. Sweeney⁵ deserves special mention. Condensation is accomplished by means of specially designed condensers with the Hollenback pneumatic gold foil mallet. Each piece of amalgam is devoid of excess mercury prior to condensation. Test specimens indicate a decrease in flow of fifty per cent and an increase in tensile strength by forty-four per cent, while expansion remains normal. If this can be demonstrated clinically by other observers, a definite improvement of amalgam fillings will result. Amalgam has been condensed by means of mallet force for a number of years; however, the peculiar action of the Hollenback mallet as well as the design of the condensers are favourable. Condensation by this method and the evaluation of its clinical results should be of interest to every practitioner using amalgam.

CONTOUR AND POLISH

It is a well-known fact that the purpose of filling restorations is to restore anatomically the lost tooth structure, and to preserve the health of and restore function to the teeth and their investing tissues. Many dentists will meticulously contour gold inlays to proper anatomic form, but will in amalgam restorations disregard this need. Again, the attitude of the dentist is reflected toward the "cheapness" of both the material and the restoration. Amalgam fillings deserve to be finished and polished; a step which takes very little time and effort. If condensation has been thorough carving may be started almost at once. Amalgam must not be burnished before its initial set because of the danger of disturbing adaptation and because mercury is carried toward the margins, weakness resulting where the greatest strength is desired.

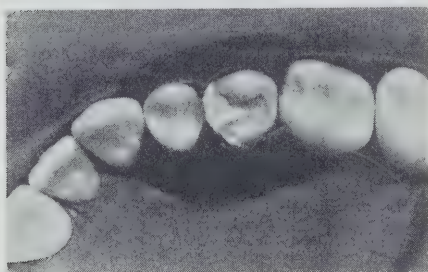


Figure 7.

Condensation should be uniform, adapted and so compressed as to remove the greatest amount of mercury with the least disturbance to the mass previously condensed.

The principal grooves should be reproduced, and all excess removed from the margins, since overlapping margins of amalgam produce the equivalent of a long bevel and fracture under masticatory stress. The grooves should not be accentuated since they tend to discolour and because maximum bulk is necessary for strength.

A convex contact point is recommended, an attempt being made to improve on nature by developing well formed buccal and lingual embrasures to prevent, as nearly as possible, subsequent decay of the adjacent surface. A definite gingival embrasure should be developed to allow for the beneficial effect that free washings of saliva afford in the prevention of recurrent caries. Gingival excess contributes to periodontal disease and the consequent loss of many teeth. Although a slight margin of excess may result from flow of the amalgam, you will agree that the harmful excess so often observed is due to carelessness in the use of improper matrices and a failure in proper contouring.

Amalgam should be completely contoured during its initial set, leaving nothing to remain but its finish and polish. This should not be accomplished for at least forty-eight hours and preferably for several days. Smooth cuttle fish discs may be used on the accessible surfaces and strips may be used to polish the gingival margin. Moist pumice may be used as the abrasive on the occlusal surface, applied with either a brush or rubber cup. Excessive heat must be avoided in polishing since mercury is thus brought to the surface resulting in early discolouration. Finally, prepared chalk used in a dry field will give the restoration a mirror-like polish. Fig. 8.

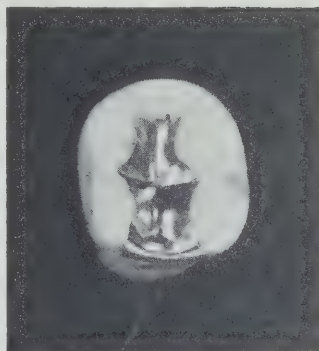


Figure 8.

Principal grooves should be restored but not accentuated. The margins must be carved flush to the cavity outline. Polished amalgam restorations do not corrode, nor markedly discolour.

Carefully placed amalgam restorations justify fees per hour comparable to those charged for gold restorations. This may require a re-education on the part of many dentists and most laymen. It is interesting to speculate on the good that would result if amalgam, instead of being abused, were scientifically and carefully manipulated. Surely amalgam restorations can and should be a valuable and important part of oral health service. Adherence to the correct principles of its manipulation will do much to prevent the loss of many natural teeth.

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- 311 E. Chicago Avenue.

With the means now available, severe pain need not be inflicted by routine dentistry. A light and delicate touch is highly appreciated by most patients. A rough or impatient manner is inexcusable, and is one of the very best ways to induce the victim to seek another dentist.—William B. Dunning.

Facing Tomorrow

IT is almost a truism of life to say that the higher one travels, upon the pathway of any walk of life the more insecure that particular avenue appears. The peasant feels most secure with his king upon the throne but the king must often think himself insecure and in a most precarious position. The client feels safety for his possessions when placed within the confines of the great financial institution but the president of that same institution must often feel forces that might undermine the whole structure. The patient feels certain of life in the hands of the great surgeon but the surgeon must often recognize his own weaknesses.

In every instance it is the faith of the subject, the patron or the patient which sustains the existing condition. Without that faith the whole correlation of humanity would perish. No matter what the future holds for us, that faith must be ever extant.

The establishment of that faith relationship between individuals means success or failure to any enterprise, be it professional or commercial. Some there are who easily gain the confidence of others, while others do not possess that natural ability.

The patient must have confidence in his, perhaps it is more appropriate to say, her dentist. It becomes a question in the last analysis as to how that condition may be established with safety to both concerned. Most of us have passed

through a period when wild attempts were made over-night to "sell" character in tidy parcels to dentists and in turn through them establish an impersonation which was supposed to bring the pocket book of the patient completely within the grasp of the dentist.

This whole procedure is surely of doubtful value for the entire emphasis is placed on the wrong place. The professional man who gains the confidence of his patients has no need of such high-pressure training and the man who has not that confidence will, if he is not exceedingly careful, eventually ruin the practice he already has if he attempts to apply such methods.

The establishment of satisfactory patient relationship is not obtained by any over-night agency. Hurried methods are seldom long lasting. Occasionally a well organized practice will degenerate usually for one reason. Kings do lose thrones; financial houses, no matter how well buttressed, do fail; and the practice of a professional man may disappear, all for one reason—loss of confidence.

One of the greatest members of our profession began a practice in the second largest city on this continent. The man who came to put his window blinds in place became his first patient. The relationship established with that workman was the foundation of his success. Surely the lesson is plain—a successful dental practice is built upon confidence.

NEDREW TELLUG.

I maintain that men who compromise their ideals and lower their working standards to meet a price rather than justify their fees on the basis of real professional service, are failures, no matter how much money they make.—T. P. Mullins. per Texas D. Journal.

The Forum

• TREATMENT OF GINGIVITIS WITH ASCORBIC ACID

PROFESSOR H. GORDON CAMP-BELL (B.M.J., March 8, p. 360) gives an account of the treatment of fourteen cases of gingivitis where massive doses of ascorbic acid had been given and where oral treatment (such as scaling the teeth or mouth washes had been withheld). 300 mg. of ascorbic acid was given daily until a urine test showed that the patient was saturated with the vitamin. In four days the gum condition had improved. Ten cases yielded to treatment, but four failed to co-operate.—*Dental Record*.

• INCIDENCE OF BACTERIEMIA IN PATIENTS WITH DENTAL DISEASE

by **MAYNARD MURRAY, M.D.**, and **FRANK MOOSNICK, B.S.**, Cincinnati, Ohio, Jnl. Lab. and Clin. Med. 26:801, Feb., 1941

TO LEARN how frequently bacteriemia occurs in dentally affected patients not subjected to operation, the following experiment was performed: Three hundred and thirty-six patients with varying degrees of dental caries and pyorrhea were asked to chew an 1-inch cube of high melting point paraffin. After chewing this for one-half hour, blood cultures were taken from the femoral artery. (The area was scrubbed with tincture of green soap and water, followed by iodine and alcohol, and then the application of tincture of merthiolate. Cultures from the skin areas so treated were routinely negative.) The blood withdrawn from the artery was mixed with brain broth containing one-half of 1 per cent peptone, and allowed to stand for six days at 37° C. Thereafter subcultures were prepared in heart infusion agar.

These blood cultures proved positive immediately after chewing in 185, or 55 per cent, of the patients studied. Follow-up blood cultures were not taken to determine how long such a bacteriemia might persist.

The organisms found were a small diplococcus in 84 per cent of the positive cultures and a slowly growing staphylococcus albus in the remaining 16 per cent. One patient displayed both organisms. Subclassification was not completed. Of 336 patients with dental disease, 185 gave positive arterial blood cultures after they had chewed paraffin for one-half hour.—*N.Y. Jour. of Dentistry*.

• VITAMIN K

IN THE course of investigations on the sterol metabolism of chicks, the Danish investigator Henrik Dam noted that chicks subsisting on certain artificial diets became anaemic and had marked tendencies to subcutaneous and intramuscular haemorrhage. He suggested that the haemorrhages and prolonged coagulation time were due to a deficiency in or a lack of a factor which he called vitamin K.

Subsequent work has shown that vitamin K is 2-methyl-3-phytyl-1, 4-naphthoquinone. This vitamin is widely distributed in green leaves and vegetables with an abundance in dried chestnuts, spinach, cabbage and alfalfa. Vitamin K₂ is chemically distinct from vitamin K₁.

Vitamin K is of value in prevention of haemorrhage in a number of conditions characterized by a low prothrombin level. The vitamin is recognized as a useful agent in obstructive jaundice and in bleeding in the new-born. There is at

present no evidence as to the usefulness of vitamin K preparations in dental practice. However, vitamin K deficiencies in dental patients may call for co-operation with the physician.—*J.A.D.A.* 27:1986 (Dec.) 1940, *per A.D.A. Release.*

• RELAXATION

by ERNEST F. DECK, D.D.S. (Penn.),
L.D.S. (Eng.)

(Excerpt from paper in *Dental Journal of Australia*,
Feb., 1941.)

IN ORDER to keep fit and preserve the greatest zest for one's work it should

be the practice to take a mid-week half-holiday and spend it at golf, tennis, sailing or in whatever way you may gain the needed fresh air, exercise and relaxation. When I go away for the week-end including all Saturday, the mid-week holiday is not taken. By treating yourself generously in the matter of relaxation, you will be doing the best for your patients, in that you can give of your best when feeling absolutely fit and well, and for yourself in that it will enable you to continue in practice and enjoy doing so for the longest period of years.

Believe me, in the new England there will be no place for those who refuse to face facts, and it is good for us to prepare our minds for the hard times that are coming, for if we wait until they are upon us it will be too late. This is true for every member of the community and has its special message to our own profession.

I am perfectly sure, also, that there is no place for the inferiority complex in the make-up of the future dentist, and equally we are going to take the necessary steps to exorcise this evil spirit.

*"The old order changeth, giving place to new,
And God fulfils Himself in many ways,
Lest one good custom should corrupt the world."*

Let us then be sure of our own destinies. Let us make up our minds, each one of us, according to the measure of his own capacity to realize this assurance and to confront the adventure of life with this elementary proposition that Dentistry is the finest profession in the world if we care to make it so.—A. E. Rowlett, L.D.S.R.C.S. Eng., Past President, British Dental Association.



"I told you we were giving him too much gas."

Courtesy of Hospital Management.

• DENTISTRY - - A PERPETUAL
EDUCATION

by H. D. GRUBB, D.D.S., Cleveland, Ohio

ONE of our leaders has said that a dentist out of dental school ten years, should have added to his knowledge in that time as much, if not more, than he learned in school. I believe that estimate is conservative. Theoretically, the new graduate is a finished product, ready to handle intelligently any difficulty that presents itself. Actually he is just beginning to learn. He is like those electric torches that are guaranteed up to a certain date. If before the expiration of his capacity he does not renew his batteries, he, like the torch, will go out of business.

In all professions the need for adult education, for a constant growth after graduation is recognized, but nowhere is this continued growth more important than in dentistry which is daily facing new problems.

The average dentist, like the average physician, lawyer, or other professional man, is quicker to apprehend the new than to profit by it. All too often the enthusiastic advocate of advance fails utterly to put his faith to a test. The hide-bound habit of clinging to ancient and honourable tradition is the besetting sin of all of us.

True, many dentists have been known to "muddle through" as the British say, handsomely for years, on what the business man calls "velvet"—a clientele that is not aware of the best possibilities of modern dentistry. But that kind of clientele is rare in our part of the world which is alive to scientific advance and demands the best.

Moreover, even our dental problems will not stand still but are forever moving on to new and strange patterns. People in this hectic, civilized world persist in having new diseases or new forms of old diseases, and dental disorders reflect the same tendency. Undoubtedly these new

disorders are part of the difficulty of adapting, to the multiple, torments peculiar to our day. They are in a large measure due to the high, nervous tension under which we all live and work.

Modern dentistry, like modern medicine, holds to the belief that our modern ills are largely the results of wrong living rather than of physical injury, microbes or poisons thrust upon us from without.

In addition to the research evidence that many modern ills are centered in the decline of some organs and the overgrowth of others, there is an interesting collection of facts about primitive tribes living in remote lands. Many of these people are healthy beyond belief and are possessed of splendid physiques and beautiful teeth. Their fine teeth and well developed jaws are apparently adjuncts to a more normal existence than we live today surrounded by luxuries. Knowledge of this sort is valuable to the dentist, for in addition to bringing technical skill to bear on our problems the modern dentist must also bring knowledge of life and of physiology. He must be able to warn against dangerous and wasteful ways of living. He must counsel the wisdom of a quiet and contented mind in a calm and healthy body.

Preventive dentistry takes its keynote from preventive medicine, which seeks to forestall disaster rather than find substitutes for lost function. To this end it tries to save as many teeth as possible, to find the normal for each mouth, and to treat the mouth always as a whole, related to health and beauty. This relation to beauty is another angle from which our modern dentistry appears to have increased in scope. Much as we may resent the charge, restorative dentistry in particular, is inescapably tied in with the cult for beauty. The average patient of culture and refinement who comes to a dentist, comes as much to be made whole and handsome in the sight

of his fellow men as to be relieved of pain and inconvenience. The middle-aged patient, who discovers to his dismay that he can no longer indulge in the magic smile or enjoy the groaning board of banquets, is anxious to have his appearance improved as well as to enjoy masticatory comfort. The middle-aged patient, whether he be in his middle forties, fifties, or sixties, does not "feel old." He actively resents being pigeon-holed as aged. And, why not, since he is usually a dynamic, resourceful, cheerful and amazingly productive individual?

It is the duty, as well as the privilege of the well equipped dentist, to preserve and enhance the youthful appearance and spirit of this most astonishingly youthful citizen.

Progress of the past few years has shown the increasing necessity for thoroughness and accuracy in all our methods. It has demonstrated the value of a wide knowledge of the properties of the materials we use; the necessity of being informed on all the principles of physics and chemistry that contribute to success in our work. Accuracy and again more accuracy, care and again more care in all phases of our work, these are a part of the "must" legislation we lay out for ourselves. If during our long and intricate operations we relax one iota, we take a chance that may precipitate failure.

We must maintain the evenness and reliability of a machine while at the same time exercising the flexibility of a sensitive intelligence. We must present the benign and placid exterior of a Buddha while maintaining within, the tense rigidity of a steel watch spring. In fact I know of no profession that requires more of the assorted virtues of the artist, the engineer, the scientist, the business man and the gentleman than that of a dentist. It is doubtless because of the necessity of

trying to live up to this multitudinous high standard, that most of us have an enviable pride in our profession.

Dentistry calls for absolute skill and faultless judgment. It calls for the surgeon's technique in the matter of delicacy and sureness of touch, for the surgeon's keen eyesight and infinite patience. It calls for the artist's pride in composition, colour harmony and proportion. It calls for the engineer's factual knowledge of the nature of materials and the stresses and strains to which these materials can be put. Finally it calls for the intuitive knowledge of the physician, to determine the always important physical reserves and idiosyncrasies of the patient. How will each patient react to the particular course laid out for him? How will the dental structures stand up under the barrage laid down for them?

Am I soaring too close to the heights here? Well, lest we all get mountain sickness at the prospect of so much unattainable perfection, let us return to earth at once by saying that past achievement and present set-ups seem to promise a pretty good measure of success for the competent dentist. It begins to look as if the cultured public were heartily aware of the benefits of good dentistry. The public is persuaded that good dentistry is worth the price and that bad dentistry is a menace that ought to be run off the face of the earth. The price of this goodwill, however, is constant vigilance on our part that no item of good workmanship is allowed to slump. It is tireless zeal in the performance of the most minute task. It is co-operation and desire to learn of the ways and methods of our confrères and last of all it is the will to be satisfied with nothing less than perfection in the finished product.—*Jour. of Ohio State D. Society.*

Save Our Way to Victory—Buy War Savings Certificates.

• STUDENT AT DURHAM

WILL all new students please fill in the form below by striking out the lines not required.

- A. I wish to study dentistry because
 - (1) My father says I have to.
 - (2) I've nothing else to do.
 - (3) I want to get out of the army.
- B. I wish to study at Durham because
 - (1) It's easy.
 - (2) My folks live in London.
 - (3) I like your policemen.
- C. My hobby is
 - (1) Woodwork.
 - (2) Flossying.
 - (3) Playing cards.
- D. I intend to take
 - (1) L.D.S.
 - (2) B.D.S.
 - (3) Anything I can get my hands on.
- E. I promise
 - (1) To respect the lecturers.
 - (2) Never to enter a lecture theatre drunk.
 - (3) Not to flossy during college hours.

—Univ. of Durham, School of
Medicine Gazette.

• THE EGG REDIVIVUS

IF THE egg has been deposed from its high place as a food, it has been given a new dignity as a treatment for burns—an old remedy among country people for cuts and burns. J. L. Aymard mentions in the British Medical Journal, August 3, that his attention was drawn to this by a farmer in South Africa, and he has applied it to patients in a factory where burns are frequent, having treated upwards of 2,000 burns of varying degrees but principally first and second. The value of the application of the white of egg lies in its simplicity; the emulsion can be carried in a bottle. No interference with the lesion is required, no cleaning up, no removal of ragged edges nor clipping of blisters, no notice taken of dirt. The burnt areas are covered at once with the albumen. Recovery from shock is instantaneous, and shortly after

all pain ceases, even in the sclerotic, the cornea, or any other sensitive area. For burns of the face, one or two coats are applied at intervals of a few minutes. No further dressing is needed. New epithelium grows rapidly under the albumen and there is no scarring.—*Br. Dental Jour.*

• THE VITAMIN B COMPLEX

OF THE various members of the vitamin B complex the following have been mentioned prominently in the literature: thiamine hydrochloride (vitamin B₁), riboflavin (vitamin B₂), vitamin B₃, vitamin B₄, vitamin B₅, vitamin B₆, pantothenic acid, factor W and nicotinic acid. Of these vitamins the following have been demonstrated to be necessary in human nutrition: thiamine hydrochloride, riboflavin and nicotinic acid. Evidence for the necessity of some other vitamins in the group has been presented but is not yet convincing.

Thiamine hydrochloride is of value in the prevention and treatment of beriberi and in certain other conditions which may be related to a deficiency in the vitamin. Nicotinic acid is a valuable therapeutic agent in the treatment of pellagra. A deficiency of this vitamin may be one of the numerous predisposing factors in Vincent's infection but the vitamin has not been shown to be a cure for Vincent's infection. Riboflavin deficiency may produce a marginal stomatitis.

The following are good sources of thiamine: legumes, nuts, whole grain, milk, eggs, lean meat and liver. Nicotinic acid is found in dried yeast, liver, lean meat, kale, tomatoes, turnip greens, canned salmon, peas and wheat germ. Good sources of riboflavin are kale, spinach, turnip greens, wheat germ, liver, milk, eggs, lean meat, carrots, tomatoes, and apples.—*J.A.D.A.* 28:316 (Feb.) 1941, per *A.D.A. Release*.

Let Us Face the Facts

DO YOU REALIZE

That many articles necessary to the conduct of your practice have recently been removed from the prohibited import list and again made available to you through the combined efforts of the Canadian Dental Association, the Canadian Dental Trade Association and the Canadian Manufacturers Association?

That the problems of tariffs, taxes, mail order dentistry and unemployment insurance must be effectively dealt with by our national body?

That the Journal of the Canadian Dental Association constitutes a monthly postgraduate course which alone is worth many times the total annual membership fee now paid to the C.D.A.?

That our national organization — The Canadian Dental Association — is the one body recognized by the Federal Government to represent us in national dental affairs and must be prepared to co-operate with both military and government officials in problems affecting the dentists of Canada?

That up to the present time all the activities of the C.D.A. have been carried on almost entirely by voluntary effort?

That the time has arrived for the employment of a full-time executive to adequately cope with the many pressing problems confronting our national body?

That your present membership fee contributed to the Canadian Dental Association by your Provincial Board is entirely inadequate? — An increase in fee is imperative if your interests are to be served more efficiently.

IF YOU WANT ACTION

you and your colleagues must request your Provincial Board to increase the annual fee to the Canadian Dental Association. Mail your request to the Registrar or Secretary of your Provincial Board which body will appreciate your expression of opinion on this vital problem.

Issued by Committee on National Dental Progress.



PRINCE EDWARD ISLAND

SASKATCHEWAN

Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S



D. T. Waye, Charlottetown

QUEBEC

ONTARIO

F. C. Harwood, Moose Jaw

NOVA SCOTIA



ALBERTA

E. M. Laurin, Montreal

T. R. Marshall, Toronto



S. G. Ritchie, Halifax

John Clay, Calgary

NEW BRUNSWICK

MANITOBA

BRITISH COLUMBIA



J. F. Morrison, Winnipeg

Harry H. Peters, Saint John

J. S. Bricker, Vancouver

Dr. Hannah Speaks Out of Turn

One evening, early in February, I turned on the radio and heard the latter part of a program entitled, "Citizens All", a presentation over the C.B.C. network. Several men were discussing public health problems and apparently the subject under review at the time was The Associated Medical Services Incorporated with head office in Toronto. Just as I listened in, one speaker asked the other if the dentists were participating in this service and the reply was, "No, the dentists are not socially minded enough to join with us" or words to that effect. This reply was made by Dr. J. A. Hannah, Managing Director of this medical group and it came as a great shock that a member of the medical profession should use this deplorable means of belittling a sister profession in the minds of the public.

I wrote to Dr. Hannah at once asking him upon what grounds such a statement was justifiable as I had always felt that the dental profession was quite as socially minded as any other profession or group, and that if dentists were not prepared to enter into this particular scheme it was certainly not on account of the absence of social mindedness. Instead of showing any regret for what might have slipped out inadvertently during the broadcast this

Director tried to justify his position, stating that at the time they started Associated Medical Services in June, 1937, that certain members of the dental profession had advised him that it would require \$20.00 a year, per person, to look after the teeth and mouths of the group in a dental capacity and that this estimate was somewhat out of line with the requirements and necessity of the case, particularly if the dental profession had confidence in its prophylactic procedures. He further stated that the dental profession has not been socially minded enough to demonstrate that it can produce anything of a concrete nature.

Now we all admit that the dental profession, being human, is not perfect. We have as a profession a long way to go to reach the goal we have set for ourselves. We humbly admit the existence of many deficiencies. If we did not so realize our weaknesses there would be little hope for us. We encourage direct constructive criticism from any source and try to profit by it. We welcome conferences and discussions of every type. We are doing our very best to solve the many problems which continually confront us. But when indirect measures are used, when some person thinks that we are not moving fast enough, and instead of trying to help us work out our problems in a friendly round-table manner, goes over our heads in an effort to force premature action by influencing the public and belittling us in the minds of our friends and neighbours we resent it and we resent it exceedingly. We regard this method as simply base and detestable and in this instance worse even than that, since any sane member of the medical profession ought to know better.

We are informed that the Ontario Medical Association loaned the Associated Medical Services, over which Dr. Hannah rules, \$5,000 for organization purposes and gave him their blessing so to speak to develop the project. This money, we believe, has been paid back and now the Services are no doubt acting independently, but operating with the approval of the O.M.A. as the latter organization lays down the tariff of fees to be paid by members. Dr. Hannah was no doubt selected for this post on account of his medical and organizing ability but certainly not on account of his gifts in the field of diplomacy.

In a service such as is carried on by the Associated Medical Services, only a fraction of the members require any service in any one year. Membership is restricted to those who at the time of acceptance are in reasonably good health and people with certain diseases are not admitted at all.

On the other hand, all of these same individuals would probably require dental service and some of them a great deal of service every year. If all of these members could be made dentally fit before entering the group it would obviously cost very much less to keep their mouths in a healthy condition.

Just what the cost should be per individual has not yet been arrived at for dental service of this kind but much work has been done with regard to it. In one group experiment carried out recently in one of the states of the U.S.A.

the average cost was \$46.00 per family, for minimum essential service, for the first year. This figure is probably unduly high but this would depend on the type of service expected and delivered. Furthermore, it is the consensus of opinion by leaders in this field in the U.S.A., both government and professional, that dental services organized for the low-income groups should be arranged as separate units by the dental profession and not be a part of any medical organization.

The dentists of Canada are well aware of the fact that some concrete plan must be arrived at whereby the low-income groups can receive adequate dental service at a cost within their reach. Work is being carried on to arrive at a satisfactory scheme. Undoubtedly, there should be close co-operation between the medical and dental professions in working out the plan but whatever the scheme decided upon this writer is of the opinion that it should be arranged and carried out by the dental profession quite apart from any medical scheme now in existence.

BOOK REVIEW

Exodontia by M. Hillel Feldman, D.D.S.,
Director of Dentistry, Lincoln Hospital,
Department of Hospitals, City of New
York. Third edition, thoroughly revised.
Illustrated with 217 engravings. Pub-
lished 1941 by the MacMillans in Canada,
St. Martin's House, Toronto. Price,
\$4.60.

The general practitioner of dentistry has to remove teeth frequently and he should be able to do so with a minimum of trauma to tissue locally and the systemic organism generally. His reputation as an efficient operator in all branches of his profession often hinges upon his ability in this field.

The author of this book contends that the drill is kinder to dental tissue than chisel and mallet, however expertly applied, and that a close study of the principles and technique

advised should materially simplify many difficult problems in exodontia.

The author also demonstrates the value of early surgery "when the face is swollen" in order to establish drainage and discusses a rational guide for the practitioner confronted with teeth which are associated with acute inflammatory and suppurative conditions.

Chapters are given, also, to the exodontia technique for teeth in normal alignment, abnormal alignment, roots fractured during extraction, roots fractured some time in the past, morphologically abnormal teeth, impacted teeth, pathologically abnormal teeth; the management of deciduous teeth; operative accidents; post-operative considerations; and dental malpractice jurisprudence.

A perusal of this book should prove helpful to dentists generally.—*M. H. G.*

CORRESPONDENCE

Letter to Dr. A. E. Higgins, Toronto, Ontario:

If possible I would like to receive a copy of your very interesting radio talk of Friday, March 21, on children's teeth.

Some of the irregularities mentioned in that address are noticeable in my grandchildren, and I am sure if their parents could read that address it might induce them to make an effort to have those faults corrected.

Such talks cannot fail to be of great benefit to parents who listen to them.

If the whole series of talks is available I would be deeply grateful to receive them.

(Signed) Elizabeth X, London, Ontario.

EDITOR'S NOTE: *Dr. Higgins has received a number of letters such as the above showing how much interest was created in his fine dental broadcasts.*

DENTAL CORPS NEWS

News from Headquarters, April, 1941

Two merited promotions of C.D.C. Commanding Officers to the rank of Lieutenant-Colonel has been promulgated in Overseas Routine Orders.

LIEUT.-COLONEL F. W. SAUNDERS, who relinquished the appointment of District Dental Officer, Military District No. 4, Montreal, P.Q., to proceed overseas, where he was appointed Officer Commanding the First Dental Company.

LIEUT.-COLONEL J. F. BLAIR, D.S.O., in command of the Second Dental Company and who was formerly District Dental Officer, Military District No. 1, London, Ontario.

The announcement of this upward step in rank for these administrative officers will be received with interest by their many friends in the Canadian Dental profession and the C.D.C.

MAJOR G. F. FRAWLEY, Toronto, has been transferred to the Canadian Dental Corps. Gordon was a member of the Canadian Army Dental Corps during the Great War and in 1926 re-affiliated himself with army routine by accepting a commission with the Royal Canadian Army Service Corps. From that time until the outbreak of this war, he was a most enthusiastic officer in the training of the N.P.A.M. His qualifications in having passed the Militia Staff Course were recognized and he was withdrawn from the command of a unit to take an administrative appointment at National Defence Headquarters. After going to Ottawa, further advancement was accorded him in his appointment as Assistant Director of Supply and Transport.

The desire to associate himself with his own profession has motivated his transfer to the Canadian Dental Corps where his knowledge of military affairs, along with his professional ability should be an added asset to the well functioning service which we, as dentists, may be proud of and regard as our own contribution to the Defence Forces of Canada.

Some of the larger Canadian dental schools have co-operated with the C.D.C. by advanc-

ing the dates of their final examinations by some weeks. The provincial dental licensing bodies concerned have granted licenses to the young graduates who have applied for commissions in the C.D.C. As a result, a number of young graduates are available for duty some weeks ahead of the normal time, and are being posted for duty in Districts where their services are required. The co-operation of the dental schools and licensing bodies concerned is much appreciated by the Canadian Dental Corps.

The Following Officers Are 1941 Graduates of the Faculty of Dentistry, University of Toronto, and Have Recently Received Appointments in the C.D.C.

Lieuts. J. G. Andrew, No. 16 Coy., K. V. Allan, A. A. Antoni, G. R. Covey, B. Gross, K. M. MacPherson, F. E. Coulter, No. 16 Coy., all of Toronto; Lieut. R. A. Erickson, Barrie, Ontario; Lieuts. G. M. Morrow, and N. L. Robinson, Hamilton, Ontario; Lieut. S. W. Weiler, Neustadt, Ontario; Lieut. A. E. Fyffe, No. 16 Coy., Niagara Falls, Ontario; and Lieut. D. C. Stiles, No. 16 Coy., Sutton West, Ontario.

Dental Technicians

Dean A. D. A. Mason of the Faculty of Dentistry, University of Toronto, reports that a course in training for dental technicians for the Canadian Dental Corps has been arranged as requested by Col. F. M. Lott, D.D.S., Officer directing the Corps. There are 60 members in the class, all of whom are industrious and enthusiastic about their work. Dean Mason also reports that the members of the group have Upper School standing as preliminary education. Classes began on May 5 and will continue for 26 weeks.

Dr. R. J. Godfrey of the Faculty staff is in charge of the course and associated with him are Dr. Herbert Mercer, Dr. Roy Ellis, Dr. Thos. Jones, Dr. Frank Martin, Dr. I. H. Ante, Dr. John Bothwell, Dr. W. J. S. Jackson, Dr. J. B. Pepper, Dr. Thos. Scott, Dr. J. G. Perkin, Dr. K. R. Harris and Dr. T. R. Marshall.

Major A. M. Palmer, L.D.S., D.D.S., of Calgary, Alberta, District Dental Officer of M. D. No. 13, succeeding Lieut.-Colonel Janes. He is a native of Perth, Ontario, and was graduated from the Royal College of Dental Surgeons of Ontario in 1920. He practised in Calgary, Alberta, continuously until joining the C.D.C., C.A.(AF), in October, 1939.

Major Palmer is Past President of the Calgary Dental Society and Immediate Past President of the Alberta Dental Association.



MAJOR A. M. PALMER

**Officers Appointed to No. 2 Coy., C.D.C.,
From Sept. 1, 1939, to May 10, 1941**

Lt.-Cols. W. G. Trelford and H. G. Bean, both of Toronto; Capts. R. H. Aljoe, R. M. Anderson, J. J. Armstrong, W. F. Armstrong, J. D. Barnet, R. E. Brayley, R. T. Broadworth, R. E. Carroll, R. G. Cullington, L. Davis, J. L. Dickson, W. L. Finlay, R. W. Freestone, W. T. Gildner, H. E. Gourlie, H. S. Grey, R. W. Hoffman, G. W. Holden, S. M. James, B. P. Kearney, F. A. Kohli, J. E. Lappin, G. D. Leggett, D. H. J. MacDonald, J. W. McDonald, W. T. McIntosh, W. S. Madill, R. W. Matchett, G. T. Mitton, L. J. Saunders, J. O. Shaunessy, E. B. Sisley, G. B. Shillington, W. J. Smith, A. B. Sutherland, D. M. Tanner, G. T. Walker, P. J. Watson, J. S. Wilkinson, all of Toronto; Lieuts. C. H. Avery, R. Brown, J. L. Chalmers, H. W. Eckel, R. E. Feasby, C. G. Hough, C. L. Johnston, A. Lipson, H. A. McClean, H. C. Peake, J. G. Pilkey, H. M. Potashin, P. Singer, R. M. Sparling, all of Toronto. Major J. H. Burrows, of St. Catharines, Ontario, and Major E. M. Wansbrough, of Shelburne, Ontario; Capt. P. Pearen, Acton, Ontario; Lieut. R. F. Shuttleworth, Bracebridge, Ontario; Lieut. W. R. Godard, Caledonia, Ontario; Capt. S. L. Oliver, Fort Erie, Ontario; Capt. V. R. Farrell, Grimsby, Ontario; Capts. H. R. McLaren and N. L. Simon, Hamilton, Ontario; Lieut. A. L. Williams, Hamilton, Ontario; Capts. R. C. Crosby and E. C. McKee, Kirkland Lake, Ontario; Capt. J. W. Bartholomew and Lieut. C. S. Gilbert, Newmarket, Ontario; Capts. A. E. Hobden and L. R. Mitton, Orillia, Ontario; Capt. H. C. Cobban, Paris, Ontario; Lieut. W. M. MacKay, Sault Ste. Marie, Ontario; Capts. J. A. Grant, H. T.

McLachlan and L. H. Smith, Simcoe, Ontario; Capt. N. C. Smith, Stouffville, Ontario; Lieut. G. B. Irwin, Sturgeon Falls, Ontario; Capts. O. G. Shepherd and F. M. Roulston, Lieuts. A. A. Boyd and L. E. Hubbell, Sudbury, Ontario; Lieut. G. A. Pollock, Thorold, Ontario; Capt. R. W. Hughes, Timmins, Ontario, and Capt. W. J. Butcher, Uxbridge, Ontario.

Case History

*Patient at the Canadian Dental Corps
Clinic No. 11*

This patient had been wearing a partial lower denture about eight months. The partial consisted of two bicuspid and a molar on the left, and two bicuspid and two molars on the right. It fitted very well at first but the tissues and bone gradually became sore and the denture was uncomfortable and easily displaced.

There was one molar in fairly good position on the left side and a cusp of a third molar showing on the right side. I decided

to take some x-ray pictures, both upper and lower, and to my amazement found the following condition:

The third molar on lower left impacted.

The second bicuspid on lower left impacted and lying horizontally in bone with crown under crown of second molar.

The first bicuspid on lower left impacted and lying horizontally with root to lingual of cuspid.

The first bicuspid on lower right impacted and lying horizontally.

The third molar on lower right suppressed with just a cusp showing through the gum.

The third molar on upper right impacted but a fairly good position.

The third molar on upper left impacted but in fairly good position.

I first had this patient on February 23, and on April 1 completed the extraction of all his teeth excepting the right lower impacted bicuspid, which he desired left. There is a possibility, of course, that it may give him trouble and have to be extracted at some future date. A root of the lower left impacted first bicuspid was broken and was removed after extraction of the cuspid. The root may be seen in x-rays. He has gone away quite happy that operations are completed, he is comfortable, and looking forward eagerly to his complete dentures in about three or four months' time.

E. C. McKEE, Capt.,
No. 7 Coy., C.D.C.

M.D. No. 4, Headquarters Montreal Quebec

Women's Auxiliary

The Montreal Women's Auxiliary of the Canadian Dental Corps held its second annual meeting April 23, with Mrs. F. W. Saunders in the chair. During the past year over 20,000 swabs were made by the members for use in the various extraction clinics. Mrs. H. Ross Cleveland, wool and knitting convener, reported that over 300 articles were given out in the year. Mrs. J. A. Kerr, visiting convener, told of much visiting among the families of the men and of financial assistance having been given to those having difficulties and of advice having been given in their problems. Sixty thousand cigarettes were sent to soldiers over-

seas. Running shoes were supplied to men for physical training and woollen comforts were supplied to all men going overseas.

Tea meetings were held several times during the year for wives and mothers of men of all ranks, and a Christmas tree and entertainment was given for the children.

The following officers were elected for the year 1941-42: President, Mrs. F. W. Saunders; Vice-president, Mrs. J. P. Lantier; Secretary, Mrs. H. V. Driver; Corresponding Secretary, Mrs. O. A. Lefebvre; Treasurer, Mrs. Victor Jekill; Wool and Knitting Convener, Mrs. H. Ross Cleveland, assisted by Mrs. H. L. Greaves; Visiting Convener, Mrs. J. A. Kerr; and Press Secretary, Mrs. R. A. Wheatley.—*Montreal Star*.

Dentures for Armed Forces

A total of 12,694 full dentures and 15,635 partial dentures were supplied to the members of Canada's three defence forces from the beginning of the War to January 31 last, Acting Deputy Minister of Defence H. Desrosiers stated in a return tabled in the Commons March 17.—*Ottawa Evening Citizen*.

A number of officers will attend courses at Officers Training Centres at Brockville and Victoria and twenty other ranks will go to Basic Training Centres in their respective Districts.

M.D. No. 10. Headquarters Winnipeg

A True Dental Story 1918-1940

Captain O. Brewer tells this one: About the end of November, 1940, a soldier belonging to the Veteran's Guard of Canada reported at No. 2 Dental Clinic, M. D. No. 10, for treatment.

On examination, the man was found to have had all his teeth extracted and he had no dentures.

"When did you have your teeth extracted?" asked the Dental Officer.

"About the end of the last war, sir," the man replied.

"Never had dentures?" was the next question.

"No sir, when the Officer took out my teeth, he told me the Army would notify me when my mouth was ready for dentures. I think it is O.K. now, sir."

NEWS FROM THE PROVINCES

QUEBEC:

Montreal Dental Club

The Montreal Dental Club held its last general meeting of the Season on April 28.

The President, Dr. Ken Carver was in the chair. The speaker was Dr. J. Wilfred Johnston who read a very interesting and scientific discussion on "The Sulfanilamides, their Discovery and Application to Dentistry."

Following Dr. Johnston's lecture the discussion of The Canadian Dental Association, which was begun last month, was continued. After much consideration a vote was taken and a resolution was passed by the club. The Resolution was as follows:—

WHEREAS, the Canadian Dental Association is the only National Organization capable of interpreting the ideals and needs of the dental profession for the whole of Canada, and,

WHEREAS, the Licentiates of the Quebec College of Dental Surgeons, and thereby, the Members of the Montreal Dental Club, enjoy the privileges of membership in the Canadian Dental Association in common with the Licentiates of all of the other Provinces of Canada, and,

WHEREAS for this privilege, the Quebec College of Dental Surgeons, in common with all other Provincial legal bodies, grants to the Canadian Dental Association an amount equivalent to one dollar per year for each of its Licentiates, and,

WHEREAS the Canadian Dental Association, after careful survey and study, is satisfied that it can increase its usefulness and benefits to its individual members and the profession in general in Canada by rigorous and constant attention to such matters as:—

- a) Tariffs.
- b) Health Insurance.
- c) Illegal Practice.
- d) Taxes.
- e) Post War Rehabilitation of Canadian Dental Corps Members.
- f) Aggressive Research Program.
- g) Relationships with National Bodies in other Countries.
- h) Dental Education.
- i) Insurance and Benevolence.
- j) The Journal of the C.D.A. etc., and,

WHEREAS, for this proposed program, it has been satisfactorily demonstrated that the minimum requirement of the Canadian Dental Association would be an amount equivalent to four dollars per Licentiate per year.

Therefore be it resolved,—That the Montreal Dental Club recognize that the proposed expansion of the Canadian Dental Association is of vital necessity and of paramount importance to the welfare of the dental profession in Canada and urges the Quebec College of Dental Surgeons to act in common with the other Provincial Legal Bodies, to increase its dues to the extent necessary to provide the Canadian Dental Association with an amount equivalent to four dollars per year for each Licentiate of the Province of Quebec.

■

Mount Royal Dental Society

The Mount Royal Dental Society concluded its activities for the year 1940-41 with the annual meeting and dinner held at the Mount Royal Hotel.

Dinner, served prior to the business meeting, was a happy event marked by the presence of the members' wives, and the guests for the evening, Major and Mrs. Hugh McLachlan Bell. An almost 100% attendance of the active membership resulted in a large gathering being present.

A presentation of an engraved silver cigarette box was made by Dr. Eidingen on behalf of the Society, to Dr. A. S. Soloman. Dr. Soloman has been a most untiring and unselfish worker for the organization for many years and the recognition was enthusiastically applauded.

Major Bell, a British United Press correspondent, was the speaker of the evening and his topic was "The World About Us." Speaking with his fine Scotch accent, Major Bell held his listeners' intent interest with many 'behind the news' facts.

Following a brief intermission after dinner, the ladies adjourned to another salon for a social evening while the members continued with the business meeting. A short period of silence was observed in memory of the late Dr. J. Rubin, a founder of the Society, who passed away earlier this year.

Annual Reports of the executive members were read and the President, Dr. I. N. Pesner, reviewed the activities of a most successful year. Of seven general meetings held, four were all day clinics by out-of-town clinicians. The President was thanked for his splendid efforts in leading the organization during the year.

Election of officers for the session 1941-42 was as follows: President, L. J. Rosen; Vice-pres., J. R. Persk; Secretary, G. Zimmerman; Treasurer, D. H. Muhlstock; Assistant Secretary, A. Lapin. Members of Executive Committee: M. Simon, F. Mendel, L. Eidinger, F. Fineberg and M. Levitt.

Study Club

On April 26, at the Windsor Hotel, the Montreal Study Club of Dental Technicians held its 1941 meeting. Drs. Zilinski and Sternberg, of New York, were the clinicians. Their subject was, "The Esthetics of Scientific Prosthesis as a Means of Attracting Patients." The clinicians showed a number of beautifully coloured slides showing cases wearing faulty dentures, which in all cases produced facial deformities; then they showed what could be done with proper restorations. In most cases new dentures were built out on the bucca to fill in the cheeks. The results obtained by these methods were very gratifying indeed. Later in the afternoon they displayed a number of models showing their procedure in bite opening. The meeting ended with a banquet and was enjoyed by all the members and their guests.

NOVA SCOTIA:

Queen's Canadian Fund

The Halifax Dental Society has lined up with other organizations supporting the Queen's Canadian Fund for the Relief of Air Raid Victims in Great Britain with a vote of \$50 from its funds.—*Halifax Herald*.

BRITISH COLUMBIA:

Vancouver Dental Society

When a serious study group sets out to accomplish a definite goal, its achievements give to any organization a wealth of useful

information. This statement was proven at the regular monthly meeting of the Vancouver Dental Society by Gerald D. Stibbs, B.Sc., D.M.D., and V. D. Wescott, D.M.D., of the Vancouver Diagnosis Study Club. Dr. Wescott's paper on "Clinical Bone Pathology as Encountered in the Practice of Dentistry" was a review of the teachings of Dr. Herman Becks. Dr. Stibbs' paper entitled, "Radiodontic Interpretation" was illustrated by several slides made by the group. He stressed the necessity for radiodontic examination and the basic requirements for a complete dental x-ray survey. The slides illustrated the anatomical landmarks and their variations as well as the abnormal conditions usually met. He pointed out that accurate diagnosis through a more universal use of the x-ray in dentistry, perfection of radiographic technique and keener interpretation is the goal towards which we should strive, and that the application and study necessary will be more than justified by the fuller measure of health service which we will be able to render our patients.

The following officers were elected for 1941-42: President, Dr. John T. Dawson; President-elect, Dr. Gerald D. Stibbs; Secretary-treasurer, Dr. K. R. McWilliams; Board of Censors, Drs. J. A. Chambers, E. G. Bryant, John Gansner and N. H. Scott.

ALBERTA:

Calgary Dental Society

Dr. Victor Lloyd, of Edmonton, was a guest speaker at the Calgary Dental Society meeting at the Renfrew Club on April 21. His visit to the Society was for the purpose of discussing the Western Canada Dental Meeting, in Edmonton, June 2 to 4, with the Calgary dentists. It is evident that an excellent meeting has been arranged and there is no doubt that attendance at this meeting by Southern Alberta dentists will be well worth while.

Dr. Gilchrist, Professor of Prosthetic Dentistry at the University, gave an excellent talk on the articulation of artificial teeth and discussed various methods of obtaining correct centric occlusion. He also demonstrated new uses of Acrylic Resin, particularly in the making of jacket crowns and bridges.

SASKATCHEWAN:

Saskatchewan Dental Association

The Saskatchewan Dental Association, the voluntary body in the Province, conducted one-day district conventions at three points in the Province early in May. Conventions were held at Saskatoon, Fort Qu'Appelle and Moose Jaw, with a good attendance in the larger centres. Dr. W. H. Ibberson was the feature speaker and clinician at each of the meetings. Dr. Ibberson gave a very interesting and informative talk on the subject, "Exodontia for the General Practitioner," using a large number of fine slides to illustrate his technique. Dr. J. L. Connell, of Prince Albert, was also present at each meeting and gave a résumé of the activities of the executive of the Association, since its election. Other members of the executive were also present and the representative of each District concerned presided at the meetings. It is planned to hold similar meetings at Melfort, Battleford and Regina some time during August.

■
Regina Dental Society

The April meeting of the Regina Dental Society was the closing meeting for the season and the annual election of officers for the following year was held. Dr. C. C. Clermont was elected President; Dr. D. M. MacFarland, Vice-president, and Dr. R. N. Reid, Secretary-treasurer. The retiring officers are to be heartily congratulated on a very successful year under their guidance.

■
Dr. Harry Thomson, Field Secretary of the Canadian Dental Hygiene Council, made his usual trip to the Western Provinces early in May. While in Regina he had a satisfactory interview with the Provincial Minister of Health, Hon. Dr. Uhrich.

MANITOBA:

Dental Nurses and Assistants

At the annual dinner meeting of the Winnipeg Dental Nurses' and Assistants' Association held on May 5 in the Oak Room of the St. Regis Hotel, the following officers were elected: President, Miss Jean Gordon; Vice-president, Miss Jennie Kunynsky; Secretary,

Miss Hazel Wylie; Treasurer, Miss Audrey Scott; Corresponding Secretary, Miss Lou Eyre; Social Convener, Miss Evelyn Brethour; Membership Convener, Miss Kay Hoffard; Program Convener, Mrs. Elinor Black; Editorial Secretary, Miss Marie Waslo; Sick & Visiting Convener, Miss Aileen Warren.

The installation of officers was performed with Miss L. Veal officiating and Miss M. Gilbert assisting.

Reports from various committees were read and the Treasurer reported donations to Children's Hospital, War Services Fund, Red Cross and Tuxedo Hospital.

Mrs. W. Abram, who was appointed War Work Convener in January, reported progress as follows: 7 sweaters, 13 pair of socks, 2 pair of socks outstanding, 7 lbs. scrap wool for blanket.

The Secretary gave a brief résumé of the year's activities, after which presentations were made to Miss Juel Grose and Miss Alice Bridgman.

The meeting was closed with some very interesting pictures presented by Miss Helen Carter.

A. SCOTT.

ONTARIO:

Hamilton Dental Society

The annual meeting of the Hamilton Dental Society was held April 16. Col. Frank Lott and Major Dwight S. Coons of Ottawa were guests of honour.

Doctors Percy Moore, James F. MacDonald and W. T. Griffin were presented with honorary life memberships in the Association for their outstanding contribution to the profession.

The following officers were elected: President, Dr. R. F. Flack; Vice-president, Dr. D. E. Shultis; Treasurer, Dr. Allan J. Quick; Secretary, Dr. F. M. Serena.—*Hamilton Spectator*.

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Dental Appointments During School Hours

The Public School Board of Kitchener, at its April meeting, granted the request of the Twin City Dental Association that pupils be allowed to keep dental appointments during school hours. It was stated that any teacher

who keeps students in after four o'clock when they have dental appointments should be reported to the Board.—*Toronto Star*.

Ladies' Auxiliary, Toronto

The annual meeting of the Toronto Ladies' Auxiliary to the Academy of Dentistry and the Canadian Dental Corps was held as a luncheon at the Granite Club on April 24. Mrs. Leo. Schumacher presided. Following the luncheon reports from various committees were presented. Treasurer, Mrs. H. W. Hoag, reported that \$2200 had been raised during the year and the bank balance at present was \$535.

Mrs. A. J. McDonagh, reporting on the activities of the wool committee, indicated that 515 articles have been knitted and of these, 452 have been sent to members of the Corps and that \$424 have been spent on wool.

Mrs. J. C. Fullerton, reporting for the sewing committee, told assembled members that 99 pairs of pyjamas had been made, that 63 parcels had been sent to the Dental Corps attached to the R.C.A.F., 58 had been sent to Dental Corps in Canada and 70 dispatched to Overseas.

Mrs. E. T. Guest reported that 33 pounds of tobacco and 58,600 cigarettes had been sent overseas and to Newfoundland.

Mrs. Hillier, convener of the Ladies' Bowling League, reported that the league had contributed \$42.17 to the auxiliary treasury. The three Toronto groups in the auxiliary, designated as North, East and West, contributed as follows—North \$200, East \$178 and West \$123.

The new officers of the auxiliary were announced as follows:— President, Mrs. S. S. Crouch; Vice-president, Mrs. K. R. Harris; 2nd Vice-president, Mrs. E. T. Guest; Secretary Mrs. H. W. Hoag; Treasurer, Mrs. Roger Matchett; Corresponding Secretary, Mrs. L. M. Grose, and Councillors—Mrs. H. G. Bean, Mrs. L. R. Davidson, Mrs. F. L. Dayment, Mrs. J. C. Fullerton, Mrs. H. R. Skilling and Mrs. S. A. MacGregor.

Mrs. A. E. Webster presented the retiring president, Mrs. Schumacher, with a bouquet of roses.

Dental Nurses' and Assistants' Association

HAMILTON—The Hamilton dental nurses and assistants met in the Wentworth Arms Hotel on April 16 at 6.30 p.m. for dinner. The President, Jean Morrow Weir, introduced Ilean Checkley the Toronto President, as guest of the evening.

Following dinner, the evening was spent in observing five demonstrations by the members:—

"Electro Plating of Inlay Models," by Lucile Church.

"Making the Office Attractive," by Gertrude Kidner.

"Sterilization," by Margaret Dickson.

"Removing Stains," by Eleanor Grills.

"Gold Inlay Laboratory Technique," by Jean Dalgleish.

JEAN DALGLEISH.

LONDON—Members of the London chapter met in the office of Dr. W. Y. Hogden, on April 7, with Dorothy Innes, Vice-president presiding. Madeline McKay, President was absent, owing to the sudden death of her father. A resolution of sympathy was extended to her.

For the past month the members have attended study groups on "Diet." The progress for this month consisted of splendid papers read by Mildred Grainger and Irene Challoner on "Vitamins" which were followed by general discussion.

Audrey Saunders, who is delegated to represent the chapter at the Convention in Toronto read a paper on "Art" which she will read in May.

The balance of the evening was taken up with other Convention plans.

EILEEN GREEN.

SUDBURY—The May meeting was held in the Capital Building on the evening of the 5th with President Dorothy Fowler presiding. After the usual business formalities the progress of the Red Cross effort was discussed with plans for carrying on during the summer. Misses Kennedy and Lukas offered to prepare a paper for the Convention in Toronto in May and send it in. Miss Fowler was returned as President and Miss Ina Lukas was elected Vice-president. Other officers are the same as last year.

BERNICE BOYD.

BRANTFORD—Congratulations to Brantford and District.

On April 28, nine assistants met together in Brantford and with the help of Tomye Turner, of Toronto, organized a new chapter for Ontario.

Alta Simon, assistant to Dr. F. Britton, Brantford, was elected first President, with Alberta McDunagh as Vice-president and Marion Greensides, Secretary-treasurer.

Ontario welcomes this new chapter and wishes it every success in the coming year.

MARION EDWARDS,
Ontario Publicity Convener.

HAMILTON—The regular monthly meeting of the Hamilton Dental Nurses' and Assistants' Association was held in the Wentworth Arms Hotel on May 6.

Dr. L. Kilburn introduced the speaker, Mr. Stuart M. Duncan of the Bell Telephone Company, who gave a very interesting address on "The Telephone System."

A raffle was held, by which we raised a substantial sum for the War Fund.

The new officers for the year were installed: President, Miss Margaret Thompson; Vice-

president, Miss Jean Dalglish; Recording Secretary, Miss Marjorie MacDonald; Corresponding Secretary, Miss Gertrude Kidner; and Treasurer, Miss Marjorie Smith.

Presentations were made to our retiring President, Miss Jean Morrow Weir and a gavel to our new President, Miss Margaret Thompson.

GERTRUDE KIDNER.

R.C.D.S. Resolution Supports C.D.A.

At the Annual Meeting of the Board of Directors of the Royal College of Dental Surgeons held on May 26th-30th, 1941, the following resolution was passed *unanimously*:

—That this Board agrees to give financial support to the Canadian Dental Association on an equal basis with all the other provinces of the Dominion when they do likewise. This grant must not exceed two-fifths of the total amount received by this Board from annual Licentiate Fees.

By-law No. 10 was revised to increase the Annual Licentiate fee from five dollars to ten dollars beginning January first, 1942.

DON W. GULLETT, Secretary.

EMPIRE NEWS

GREAT BRITAIN:

Tuberculosis in Shelters

Recently there has been a significant increase in the incidence of tuberculosis, especially among children and adolescents. New cases of tuberculosis are apparently as common as all the rest of the "fevers" put together, and this has been the case for the last month. It is interesting to note that most of these recent cases of tuberculosis have assumed the adult pulmonary form with a meningitic sequel in three instances.

To a large extent, what has happened is due to wartime conditions, with the air-raid shelters standing out as the main causative factor; these are crowded, unhygienic, draughty and poorly ventilated. As a result, respiratory infections in particular are easily caught and once contracted become chronic and spread like fire through the unsuspecting communities, leaving undermined health and debility in its wake. Now that civilians are

playing such a significant part in this war, there is no reason why shelter recruits should not have the same routine physical overhauls just like any person in the Services. Instead of giving him a twopenny ticket of admission to his underground cave, it would be better if he and everyone else around him were given a clean bill of health before being allowed to enter. In this way disease would be spotted early and when recognized adequate precautions could be taken.—*Guy's Hospital Gazette*, April 19, 1941.

INDIA:

Dentists for the Indian Army

For the first time in the history of the Indian Army dental surgeons are being recruited in the Indian Medical Service (Dental Branch) for work with the Indian Forces. For the present emergency commissions are being granted to dental surgeons in the Indian Medical Service (Dental Branch) on

the same terms and emoluments as those of the medical men, British Indian subjects having approved Indian or foreign qualifications as eligible. An agitation carried over a number of years in the Indian Dental Journal has brought about this welcome change. Indian troops will now have dental attention the same as in the armies of other countries.

Dental Registration in India

Bengal is the first province in India to enact a Dental Registration Act. According to this Act which came into force in 1941 persons holding qualifications from recognized Dental Colleges in India and persons having foreign qualifications which entitle them to

practice in the country where the qualification was obtained are eligible for registration. Those who do not possess any qualifications but have been in *bona fide* practice in the province for more than five years previous to the commencement of the Act are also eligible for registration.

The Calcutta Dental College and Hospital has been affiliated with the Bengal Dental Board and the examinations for the licence in dentistry will be held by the State Medical Faculty of Bengal. The Dental Board has approved of a four years course in dentistry mainly along the lines which were being followed in the Calcutta Dental College and Hospital.

GENERAL NEWS

Canadian Dental Association

L'Association Dentaire Canadienne

Notice is hereby given that Sydney Wood Bradley, Lorne E. MacLachlen, Thomas Provost, and Felix A. French, all of the City of Ottawa, in the Province of Ontario, dentists, duly qualified members of the Canadian Dental Association, L'Association Dentaire Canadienne, an unincorporated association, will apply to the Parliament of Canada, at the present or next session thereof, for a bill incorporating the said Sydney Wood Bradley, Lorne E. MacLachlen, Thomas Provost, and Felix A. French, and all other members of the said association, a body corporate and politic under the name of "Canadian Dental Association, L'Association Dentaire Canadienne."

Dated at Ottawa this 2nd day of April, 1941.

ORIAN E. B. LOW,

Solicitor for the Applicants.

—From the *Canadian Gazette*,
La Gazette du Canada.

Changes in Hospital Service in 25 year Period Reviewed

Leaders in the hospital world have reviewed the important changes in the character and scope of hospital service during the past twenty-five years in the current issue of HOSPITAL MANAGEMENT, Chicago. This is the twenty-fifth anniversary number of the publication.

Dr. Benjamin W. Black, director of Alameda Hospital and County Institutions, Oakland, Cal., and president of the American Hospital Association, points to the increased public confidence in hospital service resulting from higher standards and improved community relations efforts such as National Hospital Day, established in 1921 by HOSPITAL MANAGEMENT.

Dr. Malcolm T. MacEachern, associate director of the American College of Surgeons, which initiated its program of hospital standardization in 1918, reports that 2,806 general hospitals are now on the approved list of the College, as compared with 89 in 1918.

Robert E. Neff, administrator of University of Iowa Hospitals, Iowa City, Ia., discusses hospital service from the economic standpoint, pointing out that with decreasing income available from investments and contributions, the state must be prepared to assist voluntary hospitals in caring for those who are unable to pay for hospital service.

Dr. C. Rufus Rorem, director of the Commission on Hospital Service of the American Hospital Association, reports that on January 1, 1941, 66 approved group hospital service plans were in operation, providing hospital care for 6,000,000 persons, as compared with 60,000 on January 1, 1935, and 600,000 on January 1, 1937. During 1941, he estimates, more than \$35,000,000 will be paid to hospitals through these service groups.

Dr. S. S. Goldwater, head of the Associated Hospital Service of New York, former Commissioner of Hospitals of New York and former president of the American Hospital Association, says in an interview in this number that the next step in the service plans will be the establishment of ward service for group members on a part-pay basis which will include many low-wage groups not now able to pay any part of their care. He believes this will reduce the load on public hospitals and strengthen the position of voluntary hospitals as charitable institutions.

Dr. A. C. Bachmeyer, director of the University of Chicago Clinics, records the great advancements made in the training of hospital administrators through university and other courses which prepare hospital executives for the complex duties which confront them today.

Maurice Dubin, executive director of Sydenham Hospital, New York, says that the hospital has broadened its concept of its task to include recognition of its social responsibility to the community, so that in addition to providing technical facilities for medical, surgical and nursing care, it is also interested in the background and future status of the patient.

A copy of the Twenty-Fifth Anniversary number of "Hospital Management" will be sent you on request.

HOSPITAL MANAGEMENT

100 E. Ohio Street Chicago, Illinois, U.S.A.

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San Francisco Employees' Health Service Ruined by Politics

California & Western Medicine
Vol. 54, No. 4, April, 1941*

The City Employees' Health Service System which started out as a legitimate effort to get group medical service at reduced costs, has degenerated into a political racket. The members of the board administering this group plan for the city employees have become obsessed with their own importance and have entered into mutual squabbles and recriminations which have discredited both the board and the system.

At the outset the doctors accepted a schedule of extremely low fees in the belief that this

would be offset in part by guaranteed payment without additional collection expense. Instead, they found that even these low fees remained unpaid for months and then were paid off at as low as 52 cents on the dollar or not paid at all.

Meanwhile, the clerical work necessary for the numerous reports required by the health system, added heavily to the doctors' office expenses. The net result was to make this part of their practice a headache. The doctors pleaded again and again for fair play from the health system. They got nothing but promises—and the promises never were kept.

The latest example was an offer from the health system's board of directors to accept a new schedule of fees if 75% of the doctors voted for that schedule. Ninety-four per cent of the doctors duly voted for the new schedule. Thereupon two directors of the system repudiated the new fee schedule which the directors themselves had offered.

Wholesale withdrawal of doctors from the city employees' group health plan is now under way. The result of these withdrawals will be merely to put city employees in the same situation as the rest of the population. They can still have treatment from any doctor they want, but they will have to pay for it at the same rates paid by thousands of other San Franciscans, instead of chiselling on the rates.

The City employees had a good thing, but apparently are determined to kick it away. There is no good reason, anyway, why city employees, who already enjoy security and many other privileges not given to private employees should have medical service at lower cost than the rest of the people.—*A.D.A. Release.*

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Medical Students

The Rockefeller Foundation has made a generous offer to pay the tuition and living expenses of medical students selected by a committee of which Dr. Stopford, Vice-Chancellor of Manchester University, is the chairman. It will be a great experience for these men to share in the clinical teaching of some of the famous American schools of medicine. It is encouraging to know that there is a desire to form "pools" of learning as well as of armaments and weapons of war in these distressing times.—*Dental Record.*

*Editorial, San Francisco Examiner, March 27, 1941.

Expanding Dental Education and the Vanishing Dentist

It has been estimated that the increment of dentists required to maintain the present total in practice in the U.S.A. is about 2,250 annually. This number of graduates has not been attained for the past several years, and there has consequently been a steady decrease in the number of persons engaged in the practice of dentistry. During the current year, a total of approximately 1,600 dental students will be graduated from all of the dental schools in the United States.

In contradistinction to the shrinking number of dental students, the findings of the United States census show that dental laboratories have increased from 1,800 in 1935 to 2,080 in 1939, while receipts of dental laboratories have increased during the same period from \$17,990,000 to \$26,759,000. The number of technicians has increased from 5,061 to 6,826 and salaries have increased from \$6,224,000 to \$9,106,000. Dental laboratories, therefore, showed a 15 per cent increase in the number of establishments; a 48.7 per cent increase in receipts; a 22.3 per cent increase in laboratory owners and a 34.9 per cent increase in the number of employees. Thus, in the face of a shrinking dental profession, we are confronted with an expanding sub-professional dental personnel.—J. A. Salzmann, in *N. Y. Jour. of Dentistry*, April, 1941.

Dentistry and National Preparedness

Reports from draft boards and induction boards indicate dental disabilities to be the greatest cause of rejection. Recognition of this situation is vital in the establishment of a sound policy. The need for a maximum number of dentists in civil life, as well as an increase in the number needed in the military service, bears directly upon the health of the potential and actual military man-power of the nation.

Carefully prepared estimates of the dental profession show that 69,949 dentists are actively engaged in the practice of dentistry in the United States, of whom 45,181 are between the ages of 21 and 44 years and approximately 21,000 of draft age.

This raises a very critical problem. Except

in the large metropolitan areas, the problem seriously affects established services devoted to industrial health services and important clinics. The acute problems arising from this situation become very far reaching because of the drastic change in the entire dental service available for the nation as a whole.

During the last decade the number of dentists graduating from dental schools annually has dropped from over 2,200 to 1,800 per year. This year only 1,500 students will be graduated from the dental schools. This great reduction in the number of dentists is lowered further by losses through deaths and retirements from the profession. Viewed from the immediate effects of Selective Service, it is apparent that a considerable number of the new graduates in June, 1941, will be drafted. In the complex problem confronting our limited dental resources with the possibilities of many dentists being inducted into the military service on a non-professional status, it becomes evident that a sound solution is imperative if we are to provide even a semblance of dental service for the nation comparable with that which has been available in past years."

For the comfort it brings, I know it is encouraging to you to learn that in the very near future a decided change is anticipated which will greatly reduce the number of drafted dentists.—*Jour. of Mich. State D. Soc.*, April, 1941.

State Health Bill Proposed

Free medical, hospital, dental and burial services for all, at State expense, is proposed in an initiative measure filed with the Secretary of State today by Avery C. Moore, of Oakland.

The measure would add a new article to the Constitution, making the practice of medicine and allied sciences a public utility.

Doctors, dentists and others would be divided into two classes—those who would practice exclusively under the new amendment and receive compensation from the State up to \$10,000 a year, and those who would elect to carry on private practices.

Each professional would be free to transfer from one classification to another at any time. The new law would be administered by a State Department of Medical Care, composed of 16

members of the various professions. Each would receive \$5,000 yearly and devote his full time to the job. They would be appointed by the Governor.

This department would fix the compensation to be paid doctors and others for their services to individuals. These practitioners would be allowed minimum pay "adequate for the maintenance of a professional standard of living."—*Los Angeles, Calif., Times, March 9, 1941. A.D.A. Release.*

Double Bubble Gum

Even the familiar bubble gum that kids delight in puffing and popping has come under the vigilance of the FTC. The manufacturer of "Fleers Double Bubble Chewing Gum" has entered into a stipulation with the commission in which it agrees to discontinue representing that the gum does away with gray or dingy condition of the teeth; that food particles left between the teeth are the principal cause of bad breath; that chewing gum will rid one of unpleasant breath or will beautify the teeth; that the gum will enable people to stay awake during driving, or that it gives pep and vitality, or that it constitutes a beauty treatment through the facial exercise of chewing—in short, the gum is unable to make any claims aside from the opinionated fact that it is pure fun to just chew.—*The Davenport, Davenport, Ia., Nov., 1940, per A.D.A. Release.*

Decline in Dental Graduates

At present, there are 1,601 fourth year dental students, not enough to maintain the dental population. Each year 2,250 dentists leave practice by death or retirement. There must, therefore, be that many students graduated each year to maintain the supply. The Army will require another couple of thousand each year. That means that by the most conservative of figures each year will see a shortage of at least 2,000 dentists in the civilian population. This condition did not develop overnight, but it has been brought into front-focus by the military demands. For the last decade there has been a 26 per cent decline in dental graduates in proportion to the population.—*Edward J. Ryan in Oral Hygiene.*

Patient Survey

(Condensed from *Oral Hygiene*)

The Oklahoma Publishing Company, U.S.A., at the request of the Oklahoma State Dental Society conducted a city-wide survey by trained investigators, visiting 300 homes. Each adult was asked the same questions and the results tabulated. Some of the results are as follows: 73% went to the same dentist at the last visit as at the previous one; 48.1% gave fear of pain as the reason why people wait so long before seeing the dentist and 29.6% stated that expense was the reason; 76% believed that an established credit system would induce people to see a dentist more often; 18% said that their dentist informed them when it was time for a routine inspection, while 82% were not receiving this service; 53.7% felt that the dentist charges too much, while 46.3% said the fees were not too high; 78.7% of these people stated that they would read articles appearing in a dental educational campaign.

Decrease in Dental Profession

The dental profession is constantly diminishing. From 1930 to 1940 we had a population increase of 7.2%. Our dental population decreased 26.1%. This was due to higher standards for professional qualifications, but the result was a much higher standard of dentistry for the public. At the present time there are only 60,000 practising dentists in the entire U.S. That means one dentist for every 2,166 people. The army considers it necessary to have one dentist for every 500 soldiers. This year there are exactly 1,601 seniors in all the dental schools of the U.S. For the last ten years we have had an average of 2,250 to 2,400 deaths or retirements. In other words our profession is decreasing at the rate of about 700 per year.—*George D. Siewert, Milwaukee, Wisconsin, Chairman, W.S.D.S. Military Affairs Committee, in the Jrl. of the Wis. S. D. Soc.*

Change in Name

We have been advised that E. R. Squibb & Sons Limited have announced that in the future Enzodent will be labelled and known as Denzylor.

IN MEMORIAM

Lt.-Col. Claude Brown, of London, Ontario, aged 63, died in Glasgow, Scotland, in May, victim of a heart attack.

He was supreme director for the Knights of Columbus in Canada, member of the Board of Governors of the University of Western Ontario, and one of London's most noted citizens. He had been overseas for 13 months supervising the work of the Knights of Columbus Canadian army huts.

He was chosen by Pope Pius XI for knighthood for meritorious service to the church.

In the First Great War, Col. Brown went overseas with a field hospital. He was demobilized with the rank of Lieutenant-Colonel and for service rendered was decorated with the Order of the British Empire.

He was graduated from the Royal College of Dental Surgeons of Ontario and later took post-graduate work at the Philadelphia Dental College. He started the practice of dentistry in London, retiring after some years of service.

He was a director of the Bank of Canada, the City Gas Company, and Huron and Erie Mortgage Corporation, and the Canada Trust. He was Past President of the London Club, the London Hunt and Country Club and the Royal Canadian Golf Association.

Lt.-Col. Brown is survived by his widow.

William Wilfred Weir, of Toronto, Ontario, aged 52, died at his home, May 10, from a sudden heart seizure. He had been enjoying apparent good health up to the time of his death.

He was born at Wroxeter, Ontario, and was graduated in 1916 from the Royal College of Dental Surgeons of Ontario and since that time has practised his profession in Toronto.

He was a member of the Dental Staff of the Toronto Public School Dental Service. He was a member of Danforth Avenue United Church.

Dr. Weir is survived by his widow and one son, Aircraftman Malcolm W. Weir, his mother and three brothers.

Samuel P. Reynolds, of London, Ontario, died in his 80th year on April 10. He was graduated as a dentist in 1898 and soon afterwards began to practice in London. He retired about twelve years ago.

He was a keen student of the scientific aspects of horticulture. He was an active member of Wesley United Church, past master of St. George's Lodge, 42, A.F. & A.M., and a former member of the Current Topic Club.

Dr. Reynolds is survived by his widow, one daughter and two sons.

Ernest Jason Oliver, of Toronto, died on May 7 from a heart seizure, at his home. He had been ill for some time.

He was a native of Manitou, Manitoba, born on May 10, 1893. He was graduated in 1916 from the Royal College of Dental Surgeons of Ontario and served with the rank of Captain in the C.O.D.C. in the war of 1914-18. He was a member of the United Church.

Dr. Oliver is survived by his widow and one daughter in Toronto and his father in Manitoba.

James L. Sutton, of Lindsay, Ontario, aged 72, died at his home on April 9, after an illness of some 3 or 4 months.

He was born at Clifford, Ontario, later moving to Lindsay where he received his Collegiate education. He was graduated in 1897 from the Royal College of Dental Surgeons of Ontario.

He was a member of the I.O.O.F. and an enthusiastic curler. Dr. Sutton is survived by his widow, one daughter and five sons.

Albert Orr Sproule, of Edmonton, Alberta, aged 72, died April 23. He was born in Nova Scotia and practised dentistry there for six years before moving to Edmonton in 1904. He moved to Grande Prairie, Peace River country, in 1911 and returned to Edmonton in 1923.

Dr. Sproule is survived by one daughter and two sons.

... SECTION FRANÇAISE ...

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Envisageons les Faits

REALISEZ-VOUS

QUE plusieurs articles nécessaires à la pratique quotidienne de notre profession ont été supprimés des listes qui en prohibaient l'importation, et cela grâce aux efforts combinés de l'Association Dentaire Canadienne, de l'Association des Fournisseurs Dentaires Canadiens et de l'Association des Manufacturiers Canadiens.

QUE le problème des tarifs, des taxes, de la dentisterie par malle, de l'assurance-chomage ne peut être traité efficacement que par notre corps national.

QUE le Journal de l'Association Dentaire Canadienne, constitue un cours mensuel de perfectionnement qui vaut bien des fois ce que nous payons chaque année pour être membre de l'A.D.C.

QUE notre organisation nationale l'Association Dentaire Canadienne, est le seul corps reconnu par le gouvernement fédéral comme capable de traiter de nos affaires dentaires nationales, et qu'il doit être prêt à coopérer avec les représentants militaires ou gouvernementaux dans tous les problèmes qui affectent les dentistes du Canada.

QUE jusqu'à ce jour toutes les activités de l'A.D.C. ont presque toutes été conduites par des efforts bénévoles.

QUE le jour est venu d'avoir un exécutif plein temps pour traiter tous les problèmes que doit affronter notre corps national.

QUE la contribution comme membre de l'A.D.C. fournie par notre bureau provincial est tout à fait insuffisante et qu'il est impérieux de l'augmenter si nous voulons être servis efficacement.

SI VOUS VOULEZ

DE L'ACTION vous et vos collègues devez presser votre bureau provincial d'augmenter sa contribution à l'Association Dentaire Canadienne. Envoyez votre requête au Registraire et votre bureau appréciera votre opinion sur ce problème vital.

(Communication du Comité de l'avancement dentaire national.)

Initiative Intéressante

La Société Dentaire de Montréal a organisé, pour le mois de mai, une série de conférences destinées aux assistantes des dentistes de Montréal.

Ces causeries sont données aux jeunes filles employées dans les cabinets dentaires dans le but de grossir le bagage de science dentaire qu'elles possèdent déjà et de leur faire comprendre et apprécier d'avantage le travail qu'elles accomplissent, tous les jours, en compagnie de leur employeur.

Cette initiative a une autre raison d'être, non moins importante: c'est de faire de ces jeunes filles des propagandistes de l'Hygiène dentaire.

Il est des milieux où les enseignements du dentiste pénètrent rarement; il existe des familles, où jamais on a compris la valeur d'une bouche saine; il se trouve des personnes qui n'attachent pas toute l'importance qu'il faudrait au maintien physiologique de leurs dents et de leurs gencives. Ces situations malheureuses sont nées d'une ignorance très grande des choses dentaires: on ne sait pas, non parce qu'on ne veut pas apprendre, mais parce que jamais on a été éclairé, instruit sur des données justes d'hygiène dentaire.

Ces jeunes filles, munies de notions précises sur les services que peut rendre le dentiste à notre population, exerceront une influence précieuse dans leur famille, dans leur entourage. Elles pourront exposer, à leur façon, les avantages de l'hygiène dentaire bien comprise et continuer dans leur vie privée le travail qu'elles accomplissent dans le cabinet du dentiste.

Cette série de conférences se compose comme suit:

le 29 avril: "Le rôle de l'assistante dans le cabinet du dentiste", par le Dr Martial Durand.

le 13 mai: "L'hygiène dentaire", par le Dr J. Ferdinand Perreault.

le 27 mai: "Le brossage des dents", par le Dr Gérard Plamondon.

L'intérêt très vif manifesté par les assistantes de Montréal pour ce genre de réunions, nous encourage à continuer, l'an prochain, ces cours qui rendront ces jeunes filles plus utiles et mieux préparées à leur travail, dans le cabinet du dentiste.

Le grand nombre d'auditrices présentes à nos conférences est pour nous une preuve de leur bon vouloir et de leur désir de collaboration est un encouragement dans la tâche que se sont imposée les dirigeants de la Société Dentaire de Montréal.

GERARD DE MONTIGNY, *président.*

Le Rôle de l'Assistante dans le Cabinet du Dentiste*

par MARTIAL DURAND, D.D.S., Montréal

Lorsque le Président de notre Société Dentaire, le Dr Gérard de Montigny, m'a fait l'honneur de m'inviter à vous présenter une conférence intitulée: "Le Rôle de l'Assistante dans le Cabinet du Dentiste", j'ai accepté avec plaisir. Car cette causerie me parut être une occasion favorable de vous témoigner notre reconnaissance pour le concours inappréciable, que vous nous apportez dans l'exercice de notre profession et ensuite pour vous donner quelques conseils susceptibles d'améliorer votre travail et de vous faire apprécier davantage votre fonction dans le cabinet d'un Dentiste.

Quel est donc le rôle de l'Assistante dans le cabinet du Dentiste?

C'est d'assister le Dentiste dans le traitement du patient et de recevoir en retour une rémunération suffisante, qui lui permette de vivre.

L'Assistante est donc la personne, qui, par ses qualités, gardera et même augmentera la clientèle du Dentiste. N'oubliez pas que vous êtes le trait d'union entre la clientèle et le Dentiste; vous êtes la première, qui venez en contact avec le patient, au téléphone et au cabinet; il faut que la première impression du patient soit favorable; il est donc de votre ressort de rendre cette impression la meilleure possible.

Le dévouement, que l'Assistante doit prodiguer au Dentiste se manifestera par le don de sa personne pour le bien de l'humanité en coopérant au service de la pratique de la Dentisterie.

Cette coopération de l'Assistante consiste d'abord dans le maintien de la propreté du bureau, dans l'ordre, et dans le règne de l'hygiène, sur elle-même, autour d'elle et dans la manipulation et la stérilisation des instruments.

Que votre coiffure soit bien soignée et simple; soyez discrètes pour votre rouge sur les lèvres et pour votre poli sur les ongles; que votre uniforme soit bien blanc. Surveillez aussi le gilet de votre patron et qu'il soit immaculé.

Voyez à l'aération du bureau et de la salle d'attente; ne tolérez pas de revues à couvertures défraîchies ou déchirées sur la table de la salle d'attente; faites disparaître toute trace du client précédent, avant d'introduire un nouveau patient dans le cabinet du Dentiste.

Surveillez votre voix quand vous répondez à l'appareil téléphonique; il faut avoir une voix aimable, sympathique et parler distinctement et poliment; par votre réponse intelligente et courtoise, on jugera de vous, du bureau, du Dentiste.

Parlez directement dans l'appareil et soyez attentive à ce que l'on vous dit. Soignez votre langage, sans cependant tomber dans un excès d'affectation. Évitez les expressions vulgaires, banales, impropres, comme "o.k.", "all right", "correct" etc.

Si on vous demande si votre patron est occupé, répondez toujours dans l'affirmative; s'il est réellement pris par son travail et si on insiste pour lui parler, inscrivez le nom de l'interlocuteur sur un bout de papier et montrez-le au Dentiste; celui-ci, en connaissant le nom de la personne à l'appareil, agira en conséquence.

Ne laissez pas voir votre livre de rendez-vous, s'il n'est pas trop rempli et arrangez-vous de façon à recevoir, à brève échéance un patient qui souffre.

Vous devez aider votre patron en préparant les fiches et les dossiers et en prenant correctement le nom et l'adresse du client. Ainsi, vous éviterez bien des erreurs dans l'expédition des notes pour les soins professionnels et la tenue des fiches. Faites ce petit travail avant que le Dentiste procède l'examen de la bouche du client.

* Causerie présentée aux assistantes des dentistes de Montréal, sous les auspices de la Société Dentaire de Montréal, le 29 avril 1941.

Il faut être délicate dans l'admission et le soin des patients, la préparation de l'opéré, de la salle d'opération, des instruments, qui serviront à l'opération.

Ici, j'ouvre une parenthèse pour vous faire remarquer que vous devriez être familière avec la terminologie des différents instruments, du matériel, des médicaments utilisés dans un cabinet dentaire. Vous devriez aussi connaître les termes techniques employés pour désigner certaines affections dentaires ou buccales.

INSTRUMENTS

Brunissoirs	Fouloirs	Pincés ou daviérs
Elévateurs	Bistouris	Rongeurs
Limes alvéolaires	Ouvre-bouches	Ciseaux à émail
Gouges	Excavateurs	Ecarteurs
Explorateurs	Miroirs	Curettes
Fraises à dents	Fraises chirurgicales	Fraises à caoutchouc
Pierres	Pincés à contour	Grattoirs pour tarte
Matrices	Porte-matrices	Spatules
Plaquettes de verre	Seringues hypodermiques	Aiguilles
Seringues à eau	Poires à air	Porte-empreintes
Mandrinés	Mortiers	Pilons
Précéllés	Etc.	

MATERIELS

Alliage (mélange de métaux)	amalgame (mélange d'alliage et de mercure)
Ciment (temporaire, permanent, ciment de cuivre)	porcelaine ou silicate
Stents (gomme qui s'amollit à la chaleur et sert à prendre les empreintes)	Cire (à incrustation, à articulation, à impression)
Plastogum	Plâtre de Paris
Or (Pour incrustations, pour crochets, or platiné)	Dentocol
Chromel	Caoutchoucs et substances acryliques
Compresses	Rouleaux de coton
Bois d'oranger	Brosses à prophylaxie
Bandelettes de papier sablé ou de celluloid	Soie dentaire
	Rondelles de papier sablé

MEDICAMENTS

Alcool, déshydratant, antiseptique, astringent.
Sels d'amoniaque, sels d'amoniaque aromatisés.
Bicarbonaté de soude (soda à pâte), comme neutralisant.
Acide borique, comme antiseptique doux et guérisseur.
Collodion, pour appliquer sur légères écorchures aux doigts et aux mains.
Iode, oxyde de zinc, eugénol, acide phénique, acide chlorhydrique, nitrique, sulfurique, chromique, trichloracétique.
Nitrate d'argent, etc. etc.

MALADIES OU AFFECTIONS DENTAIRES ET BUCCALES

Aphles, Petits ulcères des muqueuses qui se guérissent avec le nitrate d'argent (attouchements) ou des pastilles de chlorate de potasse.
Gingivite, Maladies des gencives.
Abcès dentaires, Avec enflure ou non.
Fistule, Canal par où s'écoule le pus.
Pyorrhée alvéolaire, Maladies des gencives caractérisée par l'écoulement du pus et par la destruction des tissus gingivaux et alvéolaires.

Tartre. Dépôts calcaires, tartre sérique ou salivaire.

Angine de Vincent. "trenchmouth," contagieux, va affecter jusqu'à la gorge (goût métallique, mauvaise odeur).

Dents. Permanentes et temporaires, leurs noms, leurs formes, leurs fonctions, leurs dates d'éruption etc.

Comme je vous le disais plus haut, vous devez être délicates dans la préparation des instruments, qui serviront aux traitements, pour ne pas taxer au paroxysme les nerfs du patient déjà surexcités à l'approche du travail dentaire. Evitez le bruit et surtout l'étalage d'une multitude d'instruments devant les yeux du patient.

Toutes les Assistantes doivent, par esprit de justice, acquérir la science de leur profession, c'est-à-dire les connaissances théoriques et pratiques qui s'y attachent. Vous devez savoir prescrire au patient souffrant d'hémorragie à la suite d'une extraction, au patient qui vient de subir une anesthésie générale, au patient qui accuse une fluxion ou un oedème après une extraction.

Votre compétence, Mesdemoiselles, rendra plus douces les heures passées par les pauvres patients chez votre Dentiste; grâce à votre doigté, vous serez respectée, appréciée, et récompensée par la gratitude des malades à votre égard.

L'habileté professionnelle chez l'Assistante du Dentiste s'acquiert par la pratique, par l'esprit d'observation, par le travail, par l'émulation et par ses dons naturels.

L'expérience, basée sur une connaissance approfondie de son art augmente la valeur professionnelle du praticien et de son assistante; il ne suffit pas d'avoir pratiqué de nombreuses années pour devenir compétents; il faut, en plus, posséder les éléments et les principes de notre science.

Le public vous place dans le cadre de tout bureau moderne, parce que vous répandez autour de vous une atmosphère de confiance par votre loyauté au dentiste, qui vous emploie, et aux clients qui fréquentent votre bureau; il vous faut être discrètes sur les affaires personnelles de votre patron et de ses confrères et sur les confidences que vous ont faites les patients: c'est ce qu'on nomme le secret professionnel. Ce secret se dit d'une chose cachée qui doit le demeurer.

Il y a d'abord le secret naturel, qui résulte de la nature même de la chose connue, sans préjudice de l'origine de cette connaissance; il est des choses qu'on ne peut divulguer sans causer au prochain un tort ou une peine considérables. Par exemple, vous supposez qu'un patient est syphilitique à cause des précautions extraordinaires dont s'entoure le Dentiste pour les traitements de ce patient en question; ce secret oblige en justice et en charité, parce que sa divulgation causerait un tort grave. Il y a aussi le secret confié, qui peut être confidentiel ou professionnel.

Dans l'un et l'autre cas, s'il y a révélation non motivée, il y a violation de la justice.

Comme vous voyez, l'assistante doit être consciencieuse, c.à.d., prompte à saisir ce qu'il y a de permis ou de défendu, en telles ou telles circonstances et fidèle à obéir à la voix du devoir. S'il n'en était pas ainsi, vous pourriez faire un tort immense à cause de la gravité des intérêts, qui vous sont confiés et de la confiance très grande que vous témoignent les Dentistes et les patients.

Les Assistantes se doivent d'être de l'élite dans toute la mesure de leurs ressources personnelles. Aussi elles seront bonnes, de cette bonté, qui cherchent à faire plaisir et à rendre les gens heureux. La bonté donne du magnétisme personnel, elle adoucit la voix, fait épanouir un sourire conquérant, et met en évidence de bonnes manières et des procédés délicats, qui aident à faire apprécier les services rendus.

Les patients souffrants, les personnes âgées, les enfants méritent d'ordinaire une attention toute spéciale de la part de l'Assistante.

La fermeté est nécessaire pour faire contrepoids à la bonté, pour l'empêcher de dégénérer en faiblesse, sachant distinguer entre les justes exigences de vos clients et leurs caprices. La patience doit vous aider à toujours garder votre sang-froid, malgré les ennuis et les difficultés les plus imprévus; il faut que vous soyez toujours de bonne humeur, et que vous appreniez à vous supporter vous-même pour supporter les autres. Soyez dignes et vous serez estimées de tous. Estimez-vous vous-même en ayant toujours dans l'esprit, dans votre vie privée comme votre vie publique, le symbole de la blancheur de votre uniforme.

L'Angoisse Dentaire

Essai d'Interprétation Psychanalytique

REVUE DE STOMATOLOGIE

par F.-C. LUCIANI

Il est superflu, ce nous semble, de donner une définition de l'angoisse. Qui de nous n'a pas éprouvé ce sentiment pénible; cette sorte de dyspnée oppressive qui vous saisit lorsqu'on se trouve dans l'attente d'un événement plus ou moins grave? Mais, à côté de cette forme d'angoisse, que l'on pourrait appeler normale ou physiologique, et qui soit dit en passant, est devenue assez fréquente par les temps que nous vivons, il existe une autre forme, d'un caractère nettement morbide, par la disproportion entre l'intensité du sentiment anxieux et le peu d'importance de l'événement causal. C'est l'angoisse que l'on peut nommer irrationnelle. Dans cette catégorie, on peut ranger l'angoisse dentaire.

Il est un point, cependant, qu'il faut mettre au clair, tout d'abord, c'est qu'il ne faut pas confondre *anxiété* et *angoisse*. Les auteurs allemands et la plupart des auteurs étrangers, en général, ne font pas de différence entre les deux termes. En France, depuis Brissaud, on distingue l'*anxiété*, manifestation affective, purement psychique et l'*angoisse*, expression somatique de l'anxiété. En réalité, les deux sont inséparables.

Dans leur récent et excellent ouvrage "Les états anxieux", MM. les professeurs Henri Claude et Lévy-Valensi, isolent l'anxiété, *sentiment* pénible d'attente, de l'angoisse, *sensation* morbide qui l'accompagne, leur réunion constitue l'*état anxieux*, *émotion* pénible d'attente. Ainsi l'anxiété est un *sentiment*, l'angoisse une *sensation*, l'état anxieux une *émotion*.

Dans le livre que nous venons de citer, il nous a été impossible de trouver quoi que ce soit de *dentaire*, en rapport avec les états anxieux, ce qui tendrait à prouver que les auteurs n'ont jamais éprouvé de l'anxiété chez leur dentiste mais qui laisse voir aussi que l'on persiste encore, en médecine, à ignorer la bouche et les dents.

L'angoisse dentaire est pourtant un syndrome assez banal; le terme, à vrai dire, nous semble impropre, car l'angoisse n'est pas le fait des dents, mais *des soins dentaires*. Il eût été évidemment plus académique de la nommer angoisse *odontiâtrophobique*, mais ce nom trop rébarbatif, nous a fait reculer; aussi nous sommes-nous contentés du seul nom d'angoisse dentaire, beaucoup plus commode.

Nous avons pu isoler deux types tout à fait distincts de cette angoisse, que, du point de vue séméiologique, nous avons nommés:

- a) L'angoisse lipothymique.
- b) L'angoisse phobique.

Angoisse lipothymique. — Cette forme, de nature évidemment vago-sympathique, est caractérisée par une défaillance subite, accompagnée parfois de nausées et dans certains cas de phénomènes plus ou moins convulsifs simulant un ictus épileptoïde. L'angoisse domine ici toute la scène. Voici l'observation d'un cas de ce genre, qui, heureusement, ne se rencontre pas souvent:

M. T. de M. vient nous voir pour se faire soigner plusieurs dents cariées. C'est un homme jeune, assez vigoureux, rompu aux heurts de la vie, de par sa profession de capitaine de vaisseau. La veille nous avions soigné sa femme sans le moindre incident. Assis sur notre fauteuil, il ne semble éprouver nulle appréhension. Il présente, entre autres, une cavité du 2^e degré, un peu avancée, sur sa deuxième prémolaire supérieure gauche, que nous explorons d'abord à l'excavateur sans éveiller la moindre douleur; confiant dans cette première exploration, nous passons, avec le tour à fraiser, au curetage de la cavité; mais à peine l'instrument a commencé à tourner que notre patient fait une grimace, devient intensément pâle, des gouttes de sueur lui perlent au front et il est sur le point de s'évanouir. Nous arrêtons aussitôt, le malade se lève et va s'étendre, de son propre chef, bien horizontalement sur le parquet et y reste quelques minutes tranquille, en s'excusant — de ce qu'il appelle un accident idiot. — Remis après ces quelques minutes, ou se croyant tel, il revient sur le fauteuil en m'affirmant que tout va très bien et que je puis recommencer. Je reprends donc le tour, mais au bout de *quelques secondes*, les mêmes phénomènes se reproduisent et voilà notre homme obligé encore de faire connaissance avec le parquet. Cette scène s'est renouvelée à cinq reprises différentes; dans les dernières l'excavateur même déclenchait la crise et plus le malade faisait des efforts pour se contrôler, plus il en devenait incapable. Il en était vexé au delà de toute expression. D'un commun accord nous avons mis fin à tout traitement.

Je ne l'ai plus revu.

Tous les cas ne présentent pas, bien entendu, l'intensité de celui-ci. C'est quelquefois une ischémie des lèvres, une légère tachycardie, une hyperhydrose des mains ou de la face, accompagnée d'une certaine obnubilation mentale qui, si l'opérateur ne s'arrêtait pas, conduirait à l'état lipothymique plus ou moins accentué.

On peut l'observer en dehors même de toute manœuvre opératoire, par la simple vue du sang, parfois même par l'odeur d'un médicament.

Point important: on l'observe aussi assez fréquemment à la suite de la simple piqûre *avant l'injection anesthésiante* et cela pourrait donner lieu à des méprises fâcheuses.

Il est intéressant d'observer encore que cette forme d'angoisse est presque exclusivement l'apanage du *sexe masculin*, on la voit de préférence chez des individus grands et forts et l'on est souvent tout surpris de voir des gaillards bâtis en hercule, devenir sous nos yeux de véritables chiffes.

Angoisse phobique. — Dans cette forme, c'est l'appréhension, la crainte irraisonnée, une peur malade, qui dominant toute la scène. C'est le type de l'*angoisse d'attente* ou de l'*attente anxieuse*.

Ici, l'anxiété, contrairement à la forme précédente n'est pas refoulée, mais extériorisée de façon bruyante, la défense n'est plus passive, mais active. Il n'y a pas d'énergie en tension, aussi elle ne s'accompagne presque jamais de troubles lipothymiques.

C'est la forme que l'on rencontre d'habitude chez la femme et l'enfant. Entendons-nous bien, il ne faut pas comprendre dans cette forme les petites dames qui se croient très intéressantes en affichant *urbi et orbe*, l'horreur du dentiste et de son *épouvantable tourniquet*. Ce sont presque toujours de fausses anxieuses et l'on trouve souvent à l'origine de leur horreur à notre égard, quelque vieille histoire d'honoraires. L'angoisse dont il s'agit constitue un véritable état psychopathique. Le patient est absolument incapable, par lui-même, de se décider à venir nous consulter et laisserait carier, perdre toutes ses dents, souffrir mille morts plutôt que de faire le moindre pas vers notre cabinet. C'est le type achevé de l'*anxieux interprétatif pessimiste* de H. Claude et Lévy-Valensi.

Si c'est une femme, il faudra que le mari, ou une parente ou une amie la traînent jusqu'à nous. Elle viendra s'asseoir librement sur notre fauteuil, mais ses mains seront glacées, son cœur battra à se rompre et elle épiera chacun de vos gestes comme une bête

traquée; elle ne trouvera jamais le moyen de placer sa tête convenablement sur la tête, vous arrêtera à tout moment, contractera ses muscles, respirera bruyamment; ou bien aura une crise de larmes qui amènera un léger soulagement et vous permettra de finir la séance, car vous en aurez eu assez.

Quand il s'agit d'un homme, ce qui est plutôt rare, il ira surtout voir un collègue dame, dans le vague espoir que le respect inspiré toujours par le mâle, ôtera à celle-ci toute velléité de le faire souffrir. Ils sont d'ailleurs, souvent déçus.

Il va sans dire que nous ne trouverons pas chez lui le même tableau symptomatique que nous venons de voir chez la femme. Il se bornera à vous assommer de questions et recommandations, à vous prendre le bras, à sauter brusquement à la moindre douleur au risque d'abîmer votre matériel. Quelquefois, chez des confrères dont la patience s'épuise vite, la scène pourrait se terminer par de gros mots et la mise à la porte de l'*in-patient*.

Tous les cas ne sont heureusement pas de cette espèce.

Mais, nous le répétons, cette angoisse phobique est plutôt rare chez l'homme, elle est l'apanage des femmes, chez lesquelles la forme lipothymique est excessivement rare; pour notre part jamais nous ne l'avons observée. Dans notre pratique professionnelle déjà longue, nous n'avons jamais vu une femme *se trouver mal* dans notre cabinet. Nous ne comptons plus le nombre d'hommes. Il serait bizarre que nous fussions les seuls dans ce cas.

D'ailleurs entre autres raisons que nous exposerons plus loin, cela peut se comprendre quand on réfléchit que la femme, cette *éternelle blessée*, comme dit le poète, est plus habituée que nous aux petites misères de l'existence et que, d'autre part, n'étant tenue vis-à-vis de nous, à aucun amour-propre, elle n'a nul besoin de refouler son anxiété et peut exprimer librement son angoisse.

Étiologie.—Du point de vue étiologique, on trouve l'angoisse plus fréquemment chez les femmes que chez les hommes. Elle s'observe surtout chez les jeunes des deux sexes. Mais tout le monde ne fait pas de l'angoisse. Il y a évidemment un facteur héréditaire et familial, il y a des familles d'anxieux. Cette hérédité n'est pas directe.

Il existe un terrain constitutionnel anxieux, sorte d'angoisse flottante (Claude et Valensi), qui se cristallise autour d'un fait déterminé. Il y a fixation d'une tendance latente, à l'occasion d'un choc psychique.

L'angoisse est favorisée par une maladie antérieure, par le tabac, le surmenage, le tempérament sympathico-tonique, les troubles endocriniens, spécialement des thyroïdes.

Chez les enfants, l'angoisse peut naître à la suite de la mauvaise direction des parents.

Signalons en passant la stupide pratique de certains parents, qui en signe de punition, menacent leurs enfants de les *conduire chez le dentiste* s'ils ne sont pas sages.

Le traumatisme affectif subi par l'enfant à ce moment, pourra être par la suite, générateur d'un état anxieux des plus pénibles.

L'angoisse peut être aussi favorisée, ayons la franchise de le dire, par la brutalité de certains opérateurs qui ignorent la puissance immense de la douceur dans les soins des dents. C'est quelquefois à la suite d'une de ces interventions brutales que l'angoisse a pris naissance.

Pathogénie.—La pathogénie de l'angoisse dentaire fait évidemment corps avec la pathogénie de l'angoisse en général. Il faut donc considérer d'abord la pathogénie de cette dernière.

A notre humble avis, nul auteur n'a, plus scrupuleusement fouillé le contenu de l'angoisse que le professeur Freud, de Vienne.

Le monde scientifique doit beaucoup à Sigmund Freud et à l'Ecole psychiatrique viennoise, pour le travail considérable qu'ils ont fourni en vue de défricher le champ si embroussaillé de la pathologie mentale. Et ce nous est un bien agréable devoir de

leur rendre cet hommage, en ces temps de deuil pour leur malheureuse patrie et de malheur pour eux-mêmes.

Un bref exposé de la théorie de la psychanalyse est nécessaire, si l'on veut comprendre le mécanisme intime de l'angoisse et des névroses en général.

Freud est parti de cette idée que, de même que nous avons sur le PLAN SOMATIQUE une *vie neuro-végétative inconsciente* et une *vie sensorielle consciente*, nous avons également, sur le PLAN PSYCHIQUE, une *vie végétative inconsciente* et une *vie sensorielle consciente*. Selon sa formule: "*Le conscient n'est pas tout le psychique.*"

Avons-nous quelques preuves de l'existence de ce *moi psycho-végétatif*? Les lapsus, les actes manqués, les rêves, le somnambulisme, les actes accomplis sous l'influence de la suggestion hypnotique, les guérisons miraculeuses seraient sous la dépendance de ce moi inconnu.

Le contenu de ce *moi* serait formé par toutes les expériences de la vie — les souvenirs, les sentiments, les désirs plus ou moins avouables—que nous avons éprouvés depuis l'enfance et que nous croyons disparus, soit parce qu'ils ne sont plus nécessaires, soit parce qu'ils étaient incompatibles avec la vie sociale; ils n'ont pas été effacés, ils ont ETE REFOULES au tréfonds de notre *sensorium*, d'où ils peuvent revenir, dans certaines circonstances et agir comme de véritables germes morbides sur notre moi affectif.

Il y a encore autre chose dans ce contenu.

De même que nous avons dans la vie végétative des vestiges organiques de notre évolution phylogénique, nous avons aussi, dans la vie psycho-végétative des *vestiges psychiques* de cette même évolution. Et si nous observons parfois des régressions organiques vers un type ancestral, nous pouvons également rencontrer ces régressions sur le plan psychique. C'est ainsi que pour Freud, le psychisme de la première enfance est un état régressif. L'enfant qui vient de naître n'a pas un psychisme *humain rudimentaire*, mais un psychisme d'anthropoïde adulte.

En somme, il s'est constitué dans notre domaine psychique deux secteurs différents: un *secteur inférieur* obscur, malsain, soustrait à notre conscience, où des énergies nocives ont été refoulées et emmagasinées depuis l'enfance—et un *secteur supérieur*, clair et propre, où le moi se retrouve lui-même. La *barrière* qui sépare ces deux secteurs est plus ou moins solide selon le *terrain psychique* qui la supporte et elle est gardée par une censure en rapport avec le *tonus moral* du sujet.

Parmi les énergies refoulées et censurées, il en est une à la base de toutes: c'est l'*énergie sexuelle*, à laquelle Freud a donné le nom, pas très heureux de *libido*.

Tout d'abord, il faut distinguer entre le *sexuel* et le *génital*. Selon son expression: "*Le génital n'est pas tout le sexuel.*"

Dans l'enfance, seul le sexuel existe, et il existe même assez développé pour qu'on puisse y trouver, en ébauche, presque toutes les perversions sexuelles. "*L'enfant, dit Freud, est un pervers sexuel polymorphe.*"

Normalement le sexuel et le génital coïncident à la puberté et restent unis jusqu'à la vieillesse chez la femme; mais chez l'homme, le génital finit avant le sexuel à l'âge de la *généopause* et le dernier seul persiste parfois jusqu'à l'extrême vieillesse.

Chez certains sujets l'énergie sexuelle n'est pas refoulée, mais *sublimée*, c'est-à-dire, transformée en une énergie psychique d'ordre supérieur; et c'est de cette *sublimation* que naissent les œuvres des artistes, la vocation des prêtres et des religieux, l'héroïsme des soldats. . .

Chez les sujets névrotiques, la censure se révèle incapable de barrer le passage à la libido et encore moins de la sublimer.

L'énergie sexuelle refoulée se trouve pour ainsi dire en hypertension dans la zone psycho-végétative; mais cette zone est en rapport intime avec la zone neuro-végétative ou vago-sympathique, car elles se superposent l'une à l'autre; ce sera donc à travers cette dernière que l'énergie sexuelle pourra se détendre, sous la forme du syndrome

d'angoisse. L'angoisse serait ainsi la répercussion sur le plan neuro-végétatif d'un état d'hypertension sexuel existant dans la zone psycho-végétative. Pour employer l'expression de Freud, l'angoisse est la manifestation, substitutive de la libido refoulée.

Telles sont, dans les grandes lignes, les idées basiques de la psychanalyse en ce qui concerne l'angoisse. Il est évident, comme Freud le reconnaît lui-même, que ces idées ne pourraient avoir une assise solide que si l'on arrivait à démontrer l'existence d'un principe chimique caractéristique de la libido.

Est-elle sous la dépendance du système endocrino-glandulaire ou bien y a-t-il autre chose?

Certainement il y a aussi autre chose, car la libido persiste et parfois même s'exagère chez le vieillard dont le système en question est plus ou moins déficient et d'autre part, elle apparaît chez les enfants, dont ce même système n'est pas ou est peu développé.

Nous pensons que c'est dans la biologie générale qu'il faut aller chercher un peu de lumière sur ce sujet.

Il est dans la nature un phénomène mystérieux, d'un caractère téléologique incontestable, propre à satisfaire ceux-là qui admettent, dans la vie, une finalité supra-naturelle des choses naturelles.

Ce phénomène, c'est l'*assurance* prise par la nature contre une disparition possible de la vie sur la terre, par l'*abondance des germes reproductifs*, dont elle a doté tous les êtres vivants, en même temps que par les soins qu'elle a apportés à protéger lesdits germes. Chaque plante possède une infinité de semences, chaque homme une infinité de spermatozoïdes. Toutes ces semences, tous ces germes, tous ces spermatozoïdes ne fructifieront pas, mais comme si les pertes avaient été prévues, ils ont été fournis à foison (*).

Il se dégage de ce fait l'impression très nette que la perpétuation de la vie est le but essentiel assigné aux êtres vivants. Mais, ceci peut paraître paradoxal, pour que la vie puisse se perpétuer, il faut que les êtres vivants puissent mourir. Si on laisse une culture microbienne se développer *ad libitum*, elle finit, au bout de quelque temps, par se stériliser, car tous les microbes meurent. Il y a épuisement du milieu nutritif et intoxication par les produits d'excrétion. Le même fait se produirait chez n'importe quel être vivant, y compris l'homme, s'il était capable de se multiplier sans entraves. La mort est donc nécessaire à la perpétuation de la vie. *Il faut que les hommes meurent pour que L'HOMME vive.* Les êtres vivants nous apparaissent ainsi comme les dépositaires mortels d'un flambeau immortel, qu'il ne faudrait pas laisser éteindre, sous peine de graves conséquences et ce flambeau c'est l'*énergie biologique*.

Le but essentiel assigné aux êtres vivants, c'est donc de se perpétuer; aussi voyons-nous que dans la nature l'instinct de perpétuation est plus fort que l'instinct de conservation.

En voici un exemple dont nous avons été témoins: les petits du scorpion, aussitôt nés, grimpent sur le dos de leur mère et petit à petit la grignotent, se nourrissant de sa chair vivante, jusqu'à ce que, repus et leur mère dévorée, ils s'éparpillent en tous sens. Du point de vue humain, c'est le plus bel exemple de dévouement maternel que l'on puisse concevoir. Du point de vue du scorpion, c'est la soumission absolue à la loi la plus impérieuse de la nature.

"Se faire une place au soleil n'est que la moitié des luttes imposées par la vie: il faut aussi dans la mesure du possible, préparer la place de ses successeurs et comme la conservation de l'espèce est de plus grave intérêt que celle de l'individu, la lutte pour l'avenir est encore plus âpre que la lutte pour le présent. Toute mère a pour

* Nous avons essayé de donner une explication rationnelle de ce phénomène dans un petit ouvrage: *Essai d'interprétation biologique de l'univers*, paru il y a peu d'années. Les presses Universitaires de France. Librairie Alcan.

loi primordiale la prospérité des siens. Périssent tout le reste, pourvu que la nichée soit florissante" **.

Le cas du scorpion n'est pas unique et nombreux sont dans la nature, les géniteurs qui meurent, une fois leur succession assurée.

Mais la perpétuation de la vie ne serait pas possible sans l'existence de *l'instinct de reproduction* et celui-ci serait lui-même inopérant, s'il n'était pas sous la dépendance de *l'instinct sexuel*.

Donc, la vie serait impossible sans l'instinct sexuel et celui-ci nous apparaît, en dernière analyse, comme le plus puissant mobile des êtres vivants.

Ces faits confirment l'importance que Freud a donnée à cet instinct sexuel sous le nom de *libido*.

L'homme, ayant peu à peu dépouillé son animalité ancestrale par un long processus appelé *civilisation*, lequel n'est, en somme que la manifestation de la primauté de son instinct de conservation sur son instinct de reproduction; l'homme, disons-nous, a dû imposer des restrictions, des entraves, des privations même à sa libido. De là, est né un conflit persistant entre le moi psycho-végétatif, toujours soumis à l'impérieuse loi naturelle et le moi conscient, de qui la civilisation actuelle exige un certain ascétisme.

Ce conflit se trouve à l'origine de l'existence de la prostitution, véritable soupape de sûreté pour la libido normale et à ce titre, un mal nécessaire en lui-même; mais ce même conflit, chez les individus obligés à un refoulement plus ou moins absolu de leur libido et ayant une *censure* déficiente, va se traduire par des symptômes masquant la libido, tels que timidité morbide, angoisse, névroses enfin. Mais alors on nous posera la question: pourquoi la libido va-t-elle se traduire par de l'angoisse plutôt que par quelque chose d'autre? quel rapport peut-on trouver entre deux choses aussi éloignées l'un de l'autre que la sexualité et l'angoisse?

Nous allons essayer de trouver ce rapport.

Il est un fait non contestable que l'angoisse est surtout une manifestation infantile. L'enfant fait de l'angoisse à tout propos, même en dormant (terreurs nocturnes). L'obscurité, la solitude, la vue d'un animal, d'un étranger même, tout lui est motif à l'angoisse.

Freud fait naître le sentiment d'angoisse dès la naissance, par le passage de la vie aquatique intra-utérine à la vie extra-utérine. Ce sont les quelques instants d'asphyxie éprouvés par le nouveau-né avant le cri libérateur, qui créent la première impression d'angoisse et celle-ci laisse son empreinte plus ou moins marquée dans l'inconscient pour réapparaître par la suite selon les caractéristiques psychiques de l'individu.

(à suivre)

** J.-H. FABRE: *Souvenirs entomologiques*.

Fait Clinique

Observation d'un kyste paradentaire évoluant dans la joue

Un homme de 40 ans se présente avec une tuméfaction inflammatoire de la joue droite. Cette tuméfaction siège en arrière du pli nasogénien: elle est allongée verticalement se perdant en haut sous l'os malaire, et atteignant en bas le niveau de la commissure labiale. Elle paraît adhérer à la peau qui est rouge surtout à la partie inférieure. On a l'impression que là elle est sur le point de se fistuliser.

Dans la bouche, le fond du sillon vestibulaire est comblé au niveau de l'apex de la canine supérieure droite. Cette dent anciennement obturée a tous les caractères d'une dent à pulpe mortifiée. Dans ces conditions, on est amené à penser qu'il s'agit d'une suppuration ayant comme point de départ l'apex de la canine, apex très haut situé, ce

qui explique la migration du pus dans la joue. Une radiographie faite aussitôt n'infirmait pas ce diagnostic, puisqu'elle montre autour de l'apex une zone sombre, nettement limitée, de la dimension d'un pois.

Dans le but d'éviter la fistulisation jugale et la cicatrice inesthétique consécutive, on décide de procéder immédiatement au curettage du foyer périapical avec résection de l'apex de la canine.

Incision au fond du vestibule. On trouve sous la muqueuse un tissu violacé, uni, qui fait penser à un kyste paradentaire: mais comme la radio n'a montré qu'une image de granulome, on continue l'intervention du côté de l'os où la table externe ayant disparu, il est très facile de découvrir l'apex, de le réséquer et de curetter la logette périapicale. On termine par les soins habituels de la dent.

Cependant après l'intervention la joue reste aussi épaisse qu'avant et quand on la comprime entre deux doigts on voit sortir par la plaie vestibulaire un pus brunâtre. Ce signe, ajouté aux constatations opératoires, fait soupçonner qu'il pourrait s'agir d'un kyste. Son point de départ serait bien à l'apex de la canine; mais en raison de la situation très vestibulaire et très haute de cet apex, son développement se serait poursuivi, non pas à l'intérieur de l'os, mais dans les parties molles de la joue.

Les jours suivants le malade est revu, on fait des lavages: l'état de la joue reste stationnaire; la pression sur la tumeur la vide par la plaie opératoire, ainsi du moins la fistule est pour l'instant évitée.

De plus en plus persuadé qu'il s'agissait d'un kyste paradentaire jugal, très infecté, et convaincu de la nécessité d'énuccléer chirurgicalement les membranes kystiques, je me demandais comment intervenir dans cette joue, sans faire trop de dégâts et sans infecter le tissu cellulaire périkystique.

Je n'avais pas encore pris de décision quand, quelques jours après l'opération, en faisant l'expression méthodique de la poche de bas en haut, j'ai eu la surprise de voir sortir par la plaie vestibulaire une masse jaunâtre de tissus sphacelés, malodorants. Cette masse piriforme était un sac affaissé et bien que, en raison de l'état de sphacèle aucun examen histologique n'ait été demandé, je suis convaincu qu'il s'agissait bien de l'élimination totale et presque spontanée d'une membrane de kyste paradentaire.

Immédiatement après, la joue avait retrouvé sa souplesse et la guérison fut ensuite rapide, complète et définitive.

Remarques.—Cette observation est curieuse et intéressante au moins pour deux raisons:

a) C'est le seul cas où il m'ait été donné de constater l'épanouissement intrajugal d'un gros kyste à point de départ périapexien. Certes j'ai vu, comme chacun, des granulomes sur des racines vestibulées faire saillie dans le vestibule, alors que la lésion osseuse était à peine marquée sur la radiographie. — J'ai vu aussi des abcès périapicaux migrant dans la joue. — Ici l'évolution du kyste paraît avoir tenu de ces deux processus.

b) Cette histoire prouve encore que, dans certains cas du moins, une membrane kystique peut s'éliminer spontanément quand sa cause et son point d'implantation sont supprimés chirurgicalement, et la singularité de cette constatation n'empêche pas qu'elle puisse avoir, à l'occasion, des conséquences thérapeutiques.

J. BERCHER.

Infection Secondaire des Voies Gastro-Intestinales à la Suite de Maladies Buccales

En traduisant cet article pour notre numéro de mai, mon attention fut si complètement absorbée par mon travail que j'ai omis d'indiquer que cet article avait paru dans le No. 3 de la revue *The New York Journal of Dentistry*, Mars 1941.

Je tiens à réparer cet oubli que la revue soeur pourrait à bon droit considérer comme un manque de courtoisie.



Courtesy of Canadian National Railways

14TH TEE AND FAIRWAY, JASPER PARK LODGE GOLF COURSE.

In the dining-room opposite the table where I am accustomed to sit at Chequers, there hangs a magnificent picture painted more than four centuries ago by an artist in a foreign land. As I gaze at that masterpiece I am reminded of an observation that was made long ago by an aged monk to a visitor who was looking at the picture of "The Last Supper."

"I have sat here," said the monk, "nearly three-score years in the presence of that picture. I have seen my companions dropping off one by one, and since I first came here more than one generation has passed wholly away, yet those figures have remained throughout unchanged, until sometimes I wonder whether they are not the reality and we only the shadows."—The Rt. Hon. Neville Chamberlain in a speech at the opening of the Royal Academy, per Medley.



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Some Structural and Functional Features of the Alveolar Process in Relation to the Practice of Immediate Denture Service*

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IN IMMEDIATE denture service, as I understand the procedure, and I only speak of the upper jaw in the belief that the lower does not present the same difficulties, a patient's upper posterior teeth are extracted and time is allowed for healing. This constitutes the first stage. It is followed by the construction of dentures before all the remaining teeth have been removed, and the second stage is marked by the insertion of dentures immediately following the removal of the remaining teeth. Each of these stages has its interesting points, but what I have to say, has, I think, more bearing upon the second stage.

Now any problem in dentistry or medicine appears to me to be akin to a picture, in that if one views it too closely one is apt to lose perspective, and so I shall first approach the picture or subject by viewing it from afar off, gradually coming nearer in order to observe the necessary technique which has been applied to bring about the final general effect.

BONE IN GENERAL

Let us first consider some points pertaining to bone in general.

Much of the work which has been done in interpreting the form and structure of bones in relation to function has been concerned with the long bones of the body. I feel, therefore, that I need make no apology for leading up to the bony aspects of our problem by reminding you of certain features pertaining to the femur and calcaneum.

A femur (Fig. 1) sectioned longitudinally is seen to be a hollow cylinder of compact bone, which, thickest about the middle, tapers towards the ends. The central marrow or medullary cavity gives place at either end to a spongework of little bony beams or trabeculae so adequately described as cancellous bone. Within the interstices of this cancellous bone we find yet more marrow.

The bony trabeculae composing this cancellous tissue show a tendency towards a certain arrangement or architecture

* An address delivered to the Halifax Dental Society at the Nova Scotian Hotel, February 12, 1941.

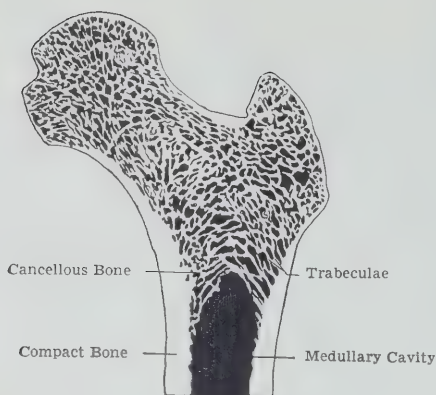


Figure 1

Frontal section of the upper end of the femur.
(After Koch.)

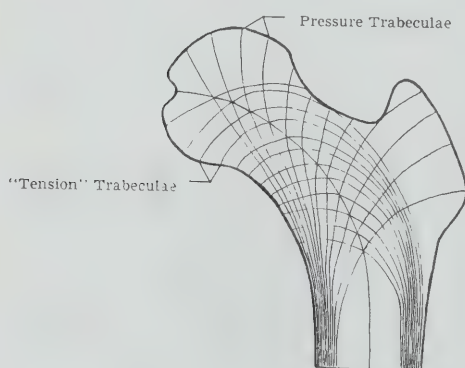


Figure 2

Diagram of the lines of stress in the upper end of the femur, based upon mathematical analysis. (After Koch.)

(Fig. 2), concerning which various theories have been put forward.

In the middle of the last century, 1867 to be exact, the German, H. Meyer¹, compared the arrangement of the trabeculae in the upper end of the femur, to the lines of stress, or so-called trajectory lines, in the head of a crane (Fig. 3). Thus was born the trajectorial theory, and ere long it was accepted that certain of the trabeculae served to transmit pressure, while others which crossed them at

right angles, knit them together, and so resisted tensile or disruptive forces.

In cancellous bone elsewhere in the body the trabeculae can be divided into pressure and tensile groups. Here for example in the heel bone or calcaneum (Fig. 4) we observe certain trabeculae passing downwards and forwards into the foot and downwards and backwards into the heel, while others pass from before backwards in the lower part of the bone. The former appear to be pressure bearers, conveying the body weight, and distributing it to the fore and hinder parts of the foot, while the latter appear to be tension elements connecting the

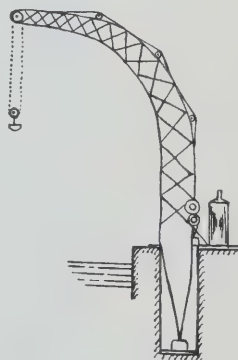


Figure 3

Fairbairn's crane. (After Sir Arthur Keith.)

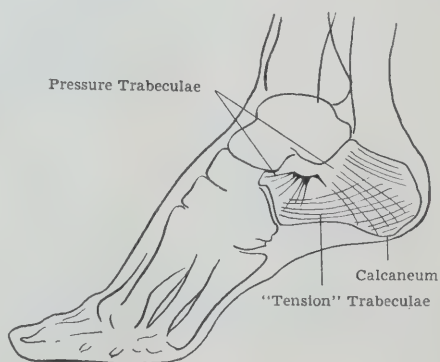


Figure 4

Diagram of the trabeculae within the calcaneum. Based upon an X ray.

main pressure tracts and tending thereby to overcome disruptive forces.

Such clear cut systems are of course not discernible in all bones, but it is worthy of note that these trabecular patterns in the lower limb bones do not acquire their final arrangement until the child begins to walk. This suggests a direct response to functional requirement. And this is further suggested by the fact that where the conditions of normal stance and gait are disturbed, as in flatfoot and clubfoot, the trabecular patterns undergo rearrangement, whereas in the paralysed and bedridden they undergo atrophy.

Just how bone responds to mechanical stimuli so as to resolve itself into these patterns is not known. Perhaps the cancellous bone in the young, which is then a close meshwork of trabeculae, is thinned out by absorptive processes which leave only such bone as is disposed along the lines of force, and can therefore be mechanically functional. And perhaps the same process is repeated in the case of new bone laid down at the site of fracture or in a bony cavity—it being laid down in excess and then thinned out to requirement, with consequent trabecular reorientation.

The tendency of cancellous bone to dispose itself in patterns conforming with the lines of stress and strain is sometimes referred to as Wolff's law.

But while mechanical stress undoubtedly plays an important role in the development and repair of bone during post-natal life, the many factors which can affect this one factor should deter us from regarding it as the single determinant of bone form. Bone form must be dependent also upon local histological, vascular, and histo-chemical factors, as well as biochemical conditions suitable to ossification.

The trajectorial theory with its pressure and tension trabeculae has not been free of criticism as is illustrated by the

work of Jansen². Bone is three dimensional—a trabecular pattern observed in one section is not necessarily observed in a section in another plane. Theoretically the pressure and tension trabeculae should always intersect at right angles—in reality they do not. The theory however did yeoman service in attracting attention to the relation between bony structure and patterns of stress, but it requires modification, and it would be safer to refrain from speaking of pressure and tension trabeculae and simply regard them as the servants of stress in general.

Let me explain. A femur or for that matter a calcaneum or any other bone is constantly being subjected by the body weight, body position, and surrounding muscles, to pressure, shearing and tensile stresses. These must employ the trabeculae in different ways and so as we look at the femur in section we should perhaps regard these as mechanical patterns well adapted to transport any type of force.

Triepel³, who, while recognizing that mechanical forces do influence bone structure, has put forward a new principle of "*harmonische Einfügung*" or harmony between external form and internal structure, and contends that the main factor determining internal structure of bone is external form. Personally I find it hard to see which is the cart and which the horse. Does the architecture influence the form or the form the architecture? I mention it because it does seem to have a relation to the question of the form or shape of the alveolar arches and the desirability of retaining as much of them as is possible at the time of extraction, without indulging in such operations as external alveolectomy.

BONE OF THE JAWS

Turning then to the bone of the jaws and the alveolar processes. MacMillan⁴ has defined the alveolar process "as that

part of the jaw bones which gives support to the teeth or their artificial substitutes," and has described it as composed of compact and cancellous tissue arranged in external contour and internal architecture in a manner to best meet the stresses transmitted by mastication.

Recognizing then the response which bone makes to either increased or decreased stress, we begin to appreciate why the almost universal and yet fallacious tendency not to regard alveolar bone as true bone should ever have arisen. For the most striking characteristic of alveolar bone is its plasticity, and I use the term as Brash⁵ did, not in the sense that alveolar bone "responds to mechanical influences by mechanical deformations, as truly plastic substances do, but in the sense that it reacts by bone deposition and bone absorption to increase or diminution or change of stimulus." In illustration let me draw your attention to figures 5 and 6. In figure 5 we see a

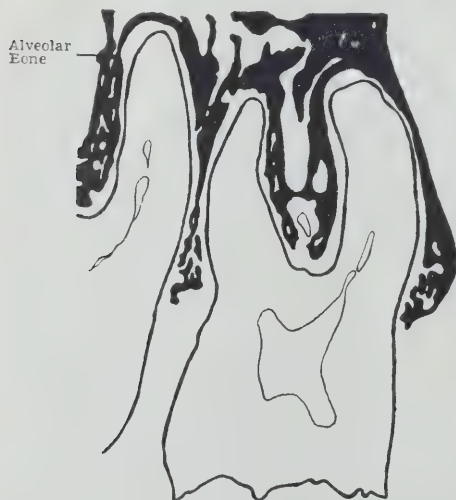


Figure 5

Section of upper molars which had antagonists in the lower jaw.

section of two upper molars which had antagonists in the lower jaw—note the well developed alveolar bone. In figure

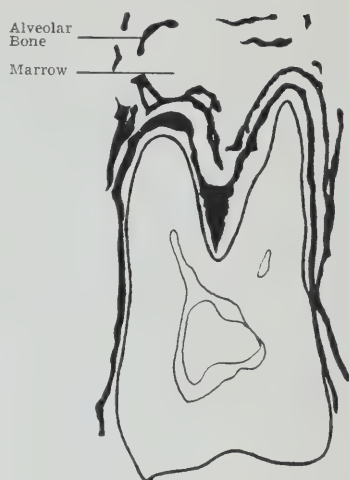


Figure 6

Section of upper molar without antagonist. Contrast the state of the alveolar bone. (After Kronfeld.)

6 we observe an upper molar without antagonist—note that much of the alveolar bone has disappeared and has been replaced by fatty marrow. You have all observed these changes in the dental radiogram.

We can see then that it shares this plasticity, which it exhibits in a marked degree, with other bones, and that it is therein no different from them. Structurally, and by that I mean histologically, it is the same as bone elsewhere, and yet I hear you say, wherein lies the secret of its plasticity?

Well, we notice in a cross section of the alveolar portion of either jaw, that there is very little compact bone, and that the bulk of the alveolar process is really due to the underlying cancellous bone (Fig. 7).

Now when we consider that cancellous bone is less stable than compact bone, and has the power of arranging itself in the path of maximum stress, we appreciate why alveolar bone has such a high degree of plasticity.

The desirability of exploiting this

Some Structural and Functional Features of the Alveolar Process

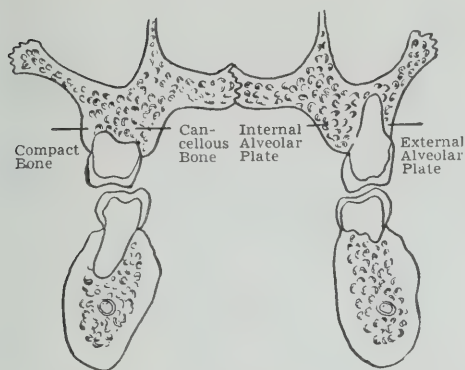


Figure 7

Section of jaws. (After Trippy and Edwards.)

quality, in an attempt to bring about a stress situation that will preserve the edentulous alveolar bone is very evident, and the insertion of dentures immediately after the extraction of the remaining teeth (second stage), gives a decided physiological ring to the practice of immediate denture service.

Recognizing then that alveolar bone is true bone, we see that it should be subject to the same surgical principles as govern the surgery of bone elsewhere; it should be preserved as much as possible, care should be taken of any blood clot associated with it, its muco-periosteum should be treated with respect, and sepsis should be avoided.

ANATOMICAL FEATURES OF ALVEOLAR PROCESS

This demands that we consider certain anatomical features of the alveolar process, and its manner of healing. The inner and outer cortical alveolar plates are thin sheets of compact bone, and the latter are so closely applied to the outer surface of the teeth, that the underlying cancellous bone is more abundant lingually than either labially or buccally.

The necessity of avoiding injury to the internal alveolar plate is apparent when it is recollected that it is the cancellous

bone therein, together with that which forms within the healing alveoli, that responds to the stress situation created by the denture.

The thinness of the outer alveolar plate is the reason why, after the loss of the teeth, it is resorbed to a greater extent than the inner plate. This is apparently employed by some as an excuse for justifying the practice of external alveolectomy. As MacMillan points out, the statement made by the advocates of alveolectomy, that only as much bone is removed surgically as is removed by natural absorption is quite unsound.

While viewing the photographs in Swenson's⁶ book dealing with immediate denture service, I was struck by the fact that the removal of the anterior maxillary teeth in the second stage was attended by the turning up of a periosteal flap and the removal of the external alveolar plate (Fig. 8).

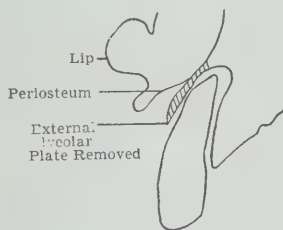


Figure 8

The procedure in external alveolectomy.

The pros and cons of this procedure should be considered. MacMillan takes a very firm attitude towards it. He points out that the periosteal flap does not form bone, and that the bone forming elements i.e. osteoblasts, in the external plate are ruthlessly removed, thereby removing the source of the cells concerned in rebuilding the ridge. Without indulging in the age-old controversy concerning whether periosteum does or does not form bone, which is really based on a verbal quibble, I see much of ad-

vantage in following his suggestion. It is that of separating the alveolar bone from the tooth and "leaving the surgically fractured alveolar fragment intact with its periosteum" (Fig. 9).

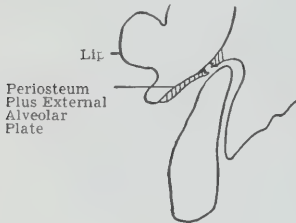


Figure 9

Procedure of surgical extraction as suggested by MacMillan.

Such a technique would trap all bone forming cells between the alveolar fragment and periosteum, and ensure their retention, but whether or not such a procedure is feasible in a mass extraction I leave for your discussion. Theoretically if such an alveolar-periosteal flap were restored to its former position by pressing it back, it should, even if the bone in it were initially absorbed, provide material for the rebuilding of the alveolar ridge.

MODE OF HEALING

Having touched on the essential features of the alveolar process, and noted the importance of its conservation, let us turn to its mode of healing. It is unfortunate that we describe the processes following on tooth extraction as "absorption," as the process is really one, to again quote MacMillan, of "rebuilding." It really is rebuilding, for the processes of bone formation and bone resorption occur simultaneously and continue as parallel processes until bone growth ceases.

The region of the alveolus is rebuilt through the agency of the bone-removing and bone-forming cells, or osteoclasts and osteoblasts, derived from the alveolar

border and lamina dura. These withdraw and lay down bone in response to the functional stresses and strains applied to the region in accordance with Wolff's law.

How is the rebuilding achieved? Initially of course the alveolus is filled with clot. Gradually the mouth epithelium grows over it, and delicate blood-vessels and connective tissue grow into it. This stage of organization is attended by the resorption of the alveolar wall and crest, and the laying down of new cancellous bone along the columns of connective tissue within the clot, so that eventually the body of the alveolus is filled with cancellous bone. Finally a cortical plate is laid down covering the area.

Warren Schram⁷ has given us a very clear picture of the processes involved in rebuilding. This he obtained by removing the maxillary teeth of dogs both "surgically" and by means of "forceps," killing them at varying intervals, and then sectioning the wounds. These illustrations (Figs. 10 and 11) are based on that work. They show the superiority of the final ridge if the outer plate has been maintained.

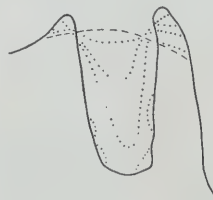


Figure 10

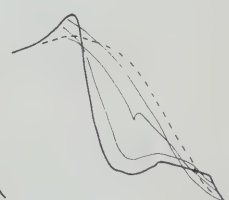


Figure 11

Forceps extraction. Figure 11. Surgical extraction. (After Schram.) The heavy continuous line indicates the form of the alveolus immediately after extraction. In Figure 10 the dotted line indicates the progress of bone formation and resorption at one, two, three and seven weeks. In Figure 11 the light continuous lines show the progress at two, three and seven weeks. The heavy interrupted line in both figures indicates approximately the eventual form of the ridge.

Some Structural and Functional Features of the Alveolar Process

A very striking feature of the process of healing is the time that it takes for the last of the blood clot to disappear. In Schram's sections it is seen to persist in the central part or depths of the alveolus two and even three weeks after operation. And therein seems to lie another point in favour of immediate denture service, for apart from the insertion of any sutures, the very presence of the denture must preserve the clot and protect it.

CONCLUSIONS

In conclusion then, it would seem that immediate denture service is definitely a physiological procedure for (a) the early insertion of the denture would appear to preserve the edentulous alveolar bone by occasioning a stress situation, (b) it must, apart from stimulating the formation of bone, ensure its growth by the protection of blood clot, and (c), ensure that the facial musculature has not time to relax and lose tone in the absence of the natural

teeth; and last, but not least, give the patient a degree of dental stability and consequent perfection, that must therewith influence his whole digestive processes.

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Conventions

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.

Secretary, A. D. Richardson, 1240 Union Avenue, Montreal.

AMERICAN ACADEMY OF PERIODONTOLOGY, HOUSTON, TEXAS, OCTOBER 23-25, 1941.

AMERICAN DENTAL ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

17TH ANNUAL SESSION OF AMERICAN DENTAL ASSISTANTS ASSOCIATION, TEXAS STATE HOTEL, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

General Secretary, Aileen M. Ferguson, 709 Centre Street, Jamaica Plain, Mass.

No one, whatever his circumstances or position, lacks the opportunity to see and absorb beauty. In the meanest street, the dingiest city, beauty can be found by those who know how to look for it. The happy, absorbed faces of children at play, the smile of a mother bending over her baby, the glow of orange and scarlet from a fruit barrow, the tenderness of creeping mist over an ancient wharf, the stark majesty of highflung railway arches; who can count the beauties to be found in the grimmest town?—Grenville Kleiser.

Report of the Committee on Nomenclature American Academy of Periodontology *

THE last extensive report from a Committee on Nomenclature to this Academy was presented at the 1937 annual meeting. At that time, the Committee on Nomenclature, with Dr. A. H. Merritt serving as Chairman, reported an exhaustive study of the problems of nomenclature related to the science of periodontology. The Academy accepted the 1937 report but no steps were taken to put into effect the recommendations of that report. The Academy and its members continue to employ, and possibly to be annoyed by, a mixture of terms, some of which are vague and not in keeping with the scientific progress made in the other phases of periodontology. The use of certain terms has prevented a more widespread diffusion of knowledge than might have been the case with a nomenclature of more specific clarity and unity of thought and expression. An exchange of ideas and thoughts is possible only if the participants employ a language of marked specificity. The newer knowledge in the field of periodontology calls for a language of more accurate definition than is now used in some circles. With these thoughts in mind, your Committee on Nomenclature respectfully submits the following report.

Terms relating to the teeth and dentistry are rooted from both Latin and Greek: The Latin word "dens" and the Greek "odous" serve as the keystones of dental nomenclature. To these roots may be added such prefixes and suffixes as are necessary to formulate words of accurate definition. It would appear reasonable logical that, if dental nomenclature

is to be in keeping with the high classical and scientific esteem to which dentistry aspires, it should be based on pure classical origins rather than made up of a collection of hybrid terms.

The science of periodontology concerns itself basically with the so-called supporting or investing structures of the teeth. Two prefixes are in use to designate collectively these tissues: "peri" and "para", both of Greek origin. The prefix "peri" has enjoyed a longer use in this country than the prefix "para". "Peri" was the only prefix used in this country in the early phases of the history of periodontology. The terms "periodontology", "periodontia", and "periodontist" were originally formulated with no thought of etymological controversy. As a matter of fact, "peri" was used rather exclusively in this country until approximately a decade ago when important contributions to dental literature began to appear from workers in Germany and Austria, some of whom we are now privileged to have as residents in this country. These workers quite naturally subscribe to the nomenclature of the Federation Dentaire Internationale. While generally accepted by European workers, the nomenclature of the Federation Dentaire Internationale has not been widely accepted in this country. Your Committee proposes to discuss some of the reasons for what may be called the American opposition to the Federation Dentaire Internationale nomenclature.

The prefix "peri" is used in anatomy and in medicine generally to designate tissues which surround, encase or en-

* Adopted at the Annual Meeting, Cleveland, Ohio, September 5, 1940.

sheath: "pericardium", "periosteum".

The prefix "para" has a much wider use. In anatomy, it is used to designate structures which lie nearby or beside: "parathyroid", "parapineal". It is also used to connote embryological relationship: "parovarium", "paroophoron". In chemistry, it is used to indicate closely related compounds: "formaldehyde", "paraformaldehyde". It is apparent that "para" is a prefix of multiple inferences and is, therefore, not as accurately descriptive as the prefix of more limited connotation, "peri".

If dental nomenclature is to be pure rather than hybrid in its etymology, the Latin root "dens" should not be used with either of the Greek prefixes "peri" and "para". Rather should the Greek root "odont" (from "odous") be employed.

A number of suffixes may be utilized in the construction of terms related to periodontal anatomy and pathology.

The Greek "klastos" (broken) is the etymological source of the derivatives "clasia" and "clastic". These suffixes are logically used to indicate non-specifically and collectively all the destructive processes, from whatever cause and of whatever nature, of the part to the name of which they are attached. Such terms naturally do not indicate the aetiology or the nature of the destructive processes. Descriptive adjectives must be added or other more specific terms used for accurate definition. The all-inclusive, non-specific terms "periodontoclasia" and "periodontoclastic", while of limited usefulness, nevertheless serve importantly in periodontal nomenclature.

The suffix "itis"—of Greek origin—is defined as a suffix indicating inflammation of the part to the name of which it is attached. Its use is so well established as to obviate discussion. The inflammatory diseases of the periodontium are, therefore, properly designated "perio-

dontitis". This term may be modified by such adjectives as may be necessary to accurately describe the prevailing disease: "acute", "chronic", "purulent", "non-purulent", "ulcerative", "hypertrophic", et cetera.

The suffix "osis" is a termination of rather wide and multiple inferences. It is used to indicate diseases or morbid processes in a broad, general sense. It is also used to indicate non-morbid processes. If a limitation on its inferences is to be placed, it may be pointed out that it is used to denote *degenerative* rather than *inflammatory* disease. For instance: (1) *nephrosis* is defined as *any* disease of the kidney, particularly those diseases *degenerative* in character: (2) an inflammatory disease of the kidney is designated *nephritis*. The use of the suffix "osis" in periodontal nomenclature may, therefore, be construed as broad, vague, and non-specific. It cannot be said to indicate accurately any one specific morbid condition but rather to connote collectively all the periodontal diseases. It may, therefore, be properly used as a synonym for the suffix "clasia".

Based upon the foregoing discussion, your Committee offers the following recommendations:

1. That, in order to have a nomenclature of pure classic origin, only Greek roots and derivatives be used in formulating periodontal terms.
2. That "odont" (from Greek "odous") be used as the basic root of periodontal nomenclature.
3. That the prefix "peri" be used to denote the supporting tissues and structures of the teeth, the term *periodontium* to be defined to include the *periodontal* membrane, the *alveolar* bone and the *gingiva*.
4. That the prefix "para" be used only when it is intended to indicate something specifically *beside* or *nearby* and not *surrounding* the tooth. The so-

called parietal abscess may properly be designated *parodontal abscess* if the lesion involves structures only on the side of or near the tooth but not involving the entire circumference of the tooth.

5. That all the diseases of the periodontium be collectively and non-specifically designated "*periodontoclasia*" or "*periodontosis*".
6. That the inflammatory diseases of the periodontium be designated "*periodontitis*".
7. That the terms "*periodontology*", "*periodontia*" and "*periodontist*" be continued in usage as now generally accepted in this country.

Your Committee concurs in the recommendation of the 1931 Committee on Nomenclature that the term "gingival crevice" be discarded in favour of the term "gingival sulcus". The reasons for this recommendation are obvious and are fully discussed in the 1931 report.

Your Committee is of the opinion that the Academy, during its twenty-seven years of vigorous and constructive activity, has made inestimable contributions to dentistry in general and, more importantly, has also been largely responsible for stimulating and guiding the notable progress in the science of periodontology in this country and throughout the world as well. By virtue of the position which

the Academy now holds, it has not only the privilege but also the responsibility of further promoting its influence. Your Committee, therefore, feels that the Academy should establish an *official* nomenclature for use in its transactions. To this end, your Committee recommends:

1. That the system of nomenclature outlined in this report be adopted as the official nomenclature of the Academy.
2. That essayists appearing on Academy programs be requested to employ the proposed official nomenclature.
3. That papers to be published in the Journal of Periodontology be editorially revised accordingly.
4. That copies of this report be sent to the Committees on Nomenclature of the American Dental Association and the Canadian Dental Association, to the secretary of the Federation Dentaire Internationale, to the executive secretary of the National Conference on Nomenclature of Diseases, to the secretary of the National Association of Dental Examiners and to all the members of the American Association of Dental Editors.

Respectfully submitted,

John Oppie McCall,
James E. Aiguier,
Harry Lyons, Chairman.

Even if baldheadedness runs in the family and longevity does not, there is no excuse for your neglecting to use medical science and advice to battle every predisposition you inherit and by early measures to prevent time-consuming and energy-lowering illnesses. No faith, however firm, even the ancient faiths in red flannel or carrying chestnuts in your pocket, will avail against bacteria, for bacteria are colour-blind and they may think chestnuts are sure signs that the carrier is just another kind of nut. You don't, of course, practice these old women's cures. You are modern and up-to-date, so you get your panaceas on the recommendation of the radio or the advertising page and pride yourself on being immune to propaganda. My advice is that you be sensible and mature enough to apply to the preservation of your health the results of the science that you are spending time and money to study in college.—President Ford of Univ. of Minnesota at the opening University Convocation, 1940.

The Forum

• PRACTICAL AND PROFITABLE DENTAL SERVICE FOR CHILDREN

by WALTER EMERSON BRIGGS, D.M.D.,
Attleboro, Mass.

(Excerpt from paper in *N.Y. Jour. of Dentistry*,
Feb., 1941.)

THE following simple rules may help the general practitioner in dealing with children:

1. Have the office furnishings appeal to the child; pictures, books, toys, games, small chairs, etc., are invaluable aids in making the young child comfortable in the office. In our office we have ten sets of wall decorations that are easily changed from time to time, that reflect such ideas as Hallowe'en, Thanksgiving, Christmas and others.

2. Be truthful, sympathetic, kindly and cheerful.

3. Deal directly with the child—not through the mother. Make the child's interests your own. Place yourself on the level of the child.

4. Explain everything carefully—never do a surprising or startling thing. Appeal to the child's reason. Tell him why you are doing things and what he will gain. Listen to his story and reply with stories appropriate to the age. Get the child to talk through suggestions and questions.

5. Attempt no work until a measure of confidence has been secured. Be content with a partial examination or even less on the first visit. Do the simplest things first—examination, prophylaxis, etc. If the child is in pain, relief should come first. Leave the more difficult work for the last.

6. Make the appointment card out to the child and ask him to keep track of it.

7. Send birthday cards and holiday greetings if you care to. Occasional letters

or cards of common interest strengthen the confidence.

8. Periodic examination discloses incipient caries and makes painless restorations possible. This is a real preventive measure which eliminates fear and develops confidence.

9. Models and charts will tell the story of care or neglect and will impress the child. These help to explain their problems to them and thus you secure their co-operation.

10. Parents will tell you that never before has the child anticipated with pleasure a visit to the dentist.

The keynote of success is gaining the confidence of the child. In order to do this I have used a red and green light signal system in my office for some time and have had excellent results. It consists of a small wooden box containing a six volt transformer, red and green lights and a single stroke gong, which strikes when the red light flashes. The patient holds a switch with a red and a green button which controls the lights. No work is attempted, not even an examination of the mouth, until the child is given the signal switch. The understanding with the child is that when he presses the button for the red light the operator will stop. To do otherwise would defeat the purpose of the signal system. A single stroke gong is attached to the red light so that I can hear the signal if I do not happen to see the red light. This signal system is inexpensive and very effective. If a child feels that he can control the operator, he will be more co-operative and a greater amount of work can be more easily and more quickly accomplished.

There Is a Limit

We often hear the remark "The sky is the limit", but is it? We fear this is not always the case. Many of us are, however, prepared to "go the limit" in doing certain things to achieve success. Now, we have men in our profession who have "gone the limit" in serving the profession out of all proportion to the benefits they have derived personally. The personal benefits are glory and honour earned by many late hours of hard work serving upon committees, poring over magazine articles, editorials and advertising matter. One gets a good deal of satisfaction doing such work and having men tell you how well the work is done, but is that enough?

For seven years now this has been going on. We, as a profession, cannot expect this work to go on forever with only a pat on the back for the faithful. We must do something about it. What must that something be? It must be a change in our organization. See to it that your effort to change this condition does not stand in the way of progress. No business can prosper on "love and wind pudding".

However, the trend now appears to be toward an early improvement of the above conditions. In some provinces, the profession has already expressed itself regarding the necessity for a strengthened National Dental Body. A short time ago the Montreal Dental Club adopted a resolution favouring increased support to the C.D.A. More recently, favourable action was taken in Ontario. As a result of expressions of opinion through resolutions from a large number of the local dental societies, letters from individuals and the ballot vote taken at the May meeting of the Ontario Dental Association, the Board of Directors of the R.C.D.S. passed a resolution placing them in a position to grant the proposed increased financial support to the C.D.A. in 1942. Concerted action in all provinces is essential if a stronger National Dental Body is to become a reality next year.

Our Journal and our Association need your support to correct a condition which has "gone the limit" and then some.

Issued by the Committee on National Dental Progress.



PRINCE EDWARD ISLAND



Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

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The Place of a Dentist in the National Emergency

by FRANK LOTT, Colonel, Canadian Dental Corps

From the dawn of existence, there has always resided in man an inherent instinct to protect his home and loved ones. And so patriotism has always been regarded as a cardinal virtue, to be ranked with honesty and justice. In fact, so fundamental is this urge that to cast a reflection upon a man's patriotism is usually considered tantamount to insulting him.

But in times of grave national emergency, this assumption of patriotism can no longer be taken for granted in the case of a person who makes no apparent effort to assist his country. And surely Canada is in such a serious position today—a desperate situation, because we must win or lose our national identity. Under this condition, all adult citizens of this country have a duty, a most urgent active duty, to contribute to its defence.

During our childhood and adolescence, the privileges of this country were freely and fully extended to us in the way of education, police protection, the utilities and the liberties. These commonplace privileges were open to us because the Wolfes, the Brocks and a multitude of unnamed

heroes had literally died to obtain and hold them for us and the De Salaberrys, the Curries and another great group served gloriously for the same reason. Now it is our turn: another enemy is at the door. If we are able-bodied, it is our privilege to follow the example of the great men above and join the active forces; if we are not, we must make our contribution in some less worthy manner.

As dentists, how does this situation affect us? At the outset, let us realize fully that because we are dentists there is no special halo around our heads—rather the reverse. We are all aware that no university dental course pays for itself. It has cost the people of Canada a considerable sum of money to complete the professional training of each of us and we have now no right to refuse to assume the responsibility which such preferred treatment undeniably entails. Again, each province of the Dominion has enacted laws regarding the practice of dentistry, giving special privileges to dentists, and these privileges again infer the accompanying responsibilities of serving the State, in which is included the duty to render dental treatment to the personnel of the Navy, Army and Air Force.

The present national emergency demands that we serve. National Defence Headquarters require us to serve in the arm where our qualifications can be used to the best advantage. If we are physically fit and within the age limit, it is imperative that we analyze our motives most seriously and determine honestly just why we have not offered to help. As dentists, our natural place of service is in the Canadian Dental Corps. The Dental Corps is short of officers, and we must not deceive ourselves as to our reasons for refusing to offer to help.

If we were in a boat where all hands must row to have their lives, what toleration should we have for the man who refused to take an oar? Should we patiently wait until he finally awoke to the fact that to save his own skin he must row? All members of the dental profession are, right now, in that boat and we should all be pulling for our lives. Then why are the able-bodied members within the age limit not bending to the task?

Let us consider some of the reasons we advance for our inaction. "I have heavy financial commitments." This is, of course, a purely relative statement and which of us could not create these commitments overnight by, for instance, increasing our insurance or contracting payments for an annuity. The suggestion in this reason is that patriotism is fine but not on the pay of a dental officer. It should not be overlooked that the pay and allowances of a Captain in the Dental Corps is greater than the net income of the average dentist across Canada, and most of us are average, professionally.

"I have a fine practice. How can I forfeit *my* income by serving." Many officers already in the Corps have already decided that question by making at least as great a sacrifice. And if the financial aspect is to be the governing one, there may be food for thought in the following extract from an Ottawa newspaper:

What will become of your money—
If Hitler should win the war?
The answer is far from funny!
There's only one answer, sure,
Your precious and prized possessions,
Will fall to the victor's loot;
And all you'll get in concessions—
Is the heel of the Nazi boot.

"Somebody has to take care of my patients." Let each one ask himself, should I become ill today and go out of practice, would my patients actually suffer? As a matter of fact, we know that, far from complaining, practically every one of our patients would congratulate us for donning the uniform and would cheerfully await our return, while our place was taken by a physically unfit or older practitioner. And, right here, we must again face the issue, if we do not win this war of what consequence is it whether a few or, in fact, many individuals have or have not received dental treatment during its duration.

"Why should I go, when Dr. So-and-so down the street has not gone?" Do his decisions govern ours in other matters? Is he the keeper of *our* conscience?

"My wife does not want me to go." "I must ask my wife." Does any good wife really want her husband to go? And yet there is no wife who is not secretly proud of her husband when he does go, irrespective of her previous attitude.

"My religious beliefs forbid me to fight." Their religious beliefs in the last war prevented the Quakers from fighting but it did not prevent them from being in the thick of the fray everywhere as stretcher-bearers, minesweepers, and other similar "cushy" jobs. The Dental Corps is not a combatant service but a healing one, and it is a strange religious belief which prohibits a man healing his fellows.

Let us return to the men in the boat. This is not a dental boat we are in but a national one, and the public are interested in what the dentists are doing. As an example, a wise crack in a newspaper recently stated that while ten per cent of the druggists of the country were in the Army, a great many dentists were still doing all their drilling in their offices.

The official recruiting poster says:

Men are urgently needed for Canadian Active Army.
Make no mistake about it—this is your call to duty—
Canada's freedom is threatened—you are needed now.

We may perhaps be excused for our view of complacency if we have failed to realize that the war is on our doorstep. But as university graduates and informed citizens we cannot continue to refuse to see the light. This is a dentists' war as much as it is a grocers' or a hardware merchants' or a lawyers'. We are sons of a courageous capable race, and it is beneath our dignity to do otherwise than face this situation frankly and to make our decision honestly and bravely.

CORRESPONDENCE

To the Unemployment Insurance Commission,
Ottawa, Ontario.

This office is being asked many questions in regard to unemployment insurance. If you could give me a definite reply in a letter to some of these questions, I will endeavour to see that the letter appears in some of our publications so that dentists may be informed on such matters.

In regard to girls who are employed in dental offices, there are two types: (1) the dental nurse who is a graduate from the University and (2), the assistant who is taken into the dental office without any previous training. Do both these come under the plan or is the one considered a professional nurse?

There is also the question of members of the dentist's family working in the office. In many cases some member of the dentist's own family acts as his assistant. It would be well to have a definite statement upon this situation.

If there is any further information particularly relating to this subject, we would be pleased to be informed.

(Signed) DON W. GULLET,
Secretary, R.C.D.S.

To Don W. Gullet, D.D.S.,
Toronto, Ontario.

Regarding your letter of June 6, I would advise you that graduate dental nurses employed in dental offices under a contract of service will be insured persons within the meaning of the Act unless their remuneration exceeds \$2,000 in a year, as will assistants in dental offices who have no professional training.

The only exception possible in the case of a dentist employing members of his family as assistants would be a wife in the employment of her husband or a child employed by and *maintained by the employer*.

I have pleasure in forwarding you a copy of the handbook for the guidance of employers and think this will be of interest to you.

We have sent a copy of this letter to our local office in Toronto with whom we suggest you communicate if any further questions arise.

(Signed) A. MACNAMARA,
Acting Chief Commissioner.

DENTAL CORPS NEWS

News from Headquarters, Ottawa, May, 1941

An exhibit of C.D.C. field equipment has been presented at the following dental conventions: British Columbia Dental Association, Vancouver, May, 1941; Ontario Dental Association, Toronto, May, 1941; Convention of French speaking dentists of North America, Quebec City, June, 1941; Western Canada Dental Society, Edmonton, June, 1941; and also in the Recruiting Campaign, Montreal, June, 1941.

During the fiscal year ending April 30, 1941, 152 dental clinics were established. These clinics varied in size from a one-chair clinic to one adapted for five chairs. Four of these clinics were for the use of the Navy, one hundred for the Army, and forty-eight for the Air Force. Wherever possible, existing military accommodation was utilized and adapted to C.D.C. requirements, and where such accommodation was not available, special dental clinic buildings were erected.

Major D. D. Coons, S.O.D.S. (Air) left for Western Canada where he will carry out an inspection of dental service in No. 2 and No. 4 Air Training Commands, R.C.A.F.

At the B.C. Dental Convention, Capt. Gibson of No. 17 Coy., Victoria, presented a table clinic on amalgam, a paper on amalgam, and a special paper for Dental Officers entitled, "Dental Treatment for the Services."

To date, a total of thirty-nine dental graduates of this year have been taken on the strength of the Canadian Dental Corps. Of these young officers, twenty-three are graduates of Toronto; five of McGill; eight of Alberta; three of Dalhousie.

Major J. F. Edgecombe, Officer Commanding 3rd Divisional Dental Company, has been promoted to the rank of Lt.-Colonel.

To date, the following 1941 dental graduates of Canadian Universities have received appointments in the Canadian Dental Corps and have been posted to Dental Companies:—

University of Toronto—Lieuts. J. P. Beattie, No. 18 Coy.; J. R. Day, No. 18 Coy.; N. L. Robinson, No. 2 Coy.; G. M. Morrow, No. 2 Coy.; B. Gross, No. 7 Coy.; K. M. MacPherson, No. 12 Coy.; S. W. Weiler, No. 15 Coy.; K. V. Allan, No. 6 Coy.; A. A. Antoni, No. 3 Coy.; G. R. Covey, No. 15 Coy.; R. A. Erickson, No. 3 Coy.; R. B. Cameron, No. 12 Coy.; A. F. Cook, No. 20 Coy.; J. B. Sproule, No. 2 Coy.; G. I. M. Robb, No. 20 Coy.; R. B. MacKenzie, No. 2 Coy.; N. T. Godfrey, No. 3 Coy.; A. E. Fyffe, No. 16 Coy.; J. G. Andrews, No. 16 Coy.; F. E. Coulter, No. 16 Coy.; D. C. Stiles, No. 16 Coy.; D. H. McDougall, No. 16 Coy.; F. W. Parrott, No. 18 Coy.

McGill University—Lieuts. R. F. Harvey, No. 4 Coy.; F. O. Frederick, No. 4 Coy.; H. L. Mussells, No. 19 Coy.; W. H. Bryant, No. 4 Coy.; K. M. Walley, No. 4 Coy.

University of Alberta—Lieuts. O. L. Oatway, No. 20 Coy.; N. W. Huculak, No. 11 Coy.; H. G. Steed, No. 17 Coy.; F. G. Pedlar, No. 10 Coy.; G. F. Gerneroy, No. 3 Coy.; J. G. Walker, No. 13 Coy.; L. S. Holmes, No. 11 Coy.; J. M. Neilson, No. 13 Coy.

Dalhousie University—Lieuts. G. B. Robinson, No. 6 Coy.; T. H. White, No. 6 Coy.; L. S. Goldberg, No. 15 Coy.

In connection with the appointments of 1941 graduates to commissions in the C.D.C., an interesting feature has come to light. Two of the young officers are sons of C.D.C. officers. Lieut. R. B. Cameron, No. 12 Coy., C.D.C., is a son of Lt.-Col. George L. Cameron,

D.S.O., V.D., Deputy Director Dental Service, Ottawa, and Lieut. J. R. Day of No. 18 Coy., C.D.C., is a son of Lieut. H. R. Day, No. 12 Coy., C.D.C.

M.D. No. 2, Headquarters, Toronto, Ontario Ladies' Auxiliary

The Ladies' Auxiliary to the Academy of Dentistry and the Canadian Dental Corps held a luncheon and emergency meeting May 29 at Diana Sweets. The President, Mrs. S. Stuart Crouch, presided.

Mrs. H. J. Mullett, who with her husband, Dr. Mullett, is home on furlough from China, was the guest of honour.

Mrs. Willard F. Armstrong outlined plans for the new sub-auxiliary which is being formed for the wives of the men of Toronto District No. 2, Canadian Dental Corps.

Plans were made for the raising of funds for war work during the summer with Mrs. Edmund T. Guest as convener.

M.D. No. 10 Headquarters, Winnipeg Ladies' Auxiliary

The annual meeting of the C.D.C. Ladies' Auxiliary, M.D. No. 10, was held May 26.

During the past year 26 dozen towels and 97 dental assistants' gowns were made and distributed from material supplied by the Red Cross. 350 pairs of socks and 211 sweaters were knitted. 52 scarves, 35 pairs of wristlets and 8 pairs of mitts were made and returned to the Red Cross. 90 parcels of knit goods and food were prepared for officers and men overseas and on draft.

The following officers were elected: Honorary President, Mrs. W. W. Wright; President, Mrs. Kenneth M. Johnson; Vice-president Mrs. P. J. Gallagher; Secretary, Mrs. J. E. Abra; Treasurer, Mrs. H. Latham; Executive members, Mrs. C. W. Steele and Dr. Olive Cole; Ways and Means Convener, Mrs. E. R. Bier, Assistant, Mrs. F. E. Warriner; Knitting Convener, Mrs. H. R. Tweed, Assistant, Mrs. W. A. Munro; Sewing Convener, Mrs. C. S. McLeod, Assistant, Mrs. N. H. Greenberg; Parcels Convener, Mrs. P. M. Johnston, Assistant, Mrs. J. M. Grahame; Visiting Convener, Mrs. B. E. Brownlee, Assistant, Mrs. A. E. Proctor.



Recent orders published by National Defence Headquarters announce the appointment of Lieut-Col. G. L. Cameron, D.S.O., V.D., to be Deputy Director of Dental Services with effect from March 27, 1941.

Lieut.-Col. Cameron served with distinction as Second-in-Command of the First Battalion during the Great War.

During the period of peace, he practised at Swift Current, Sask. During this time, he served the profession as President of the Canadian Dental Association.

He was appointed District Dental Officer of M.D. No. 12 on August 31st, 1939, when the Canadian Dental Corps was formed. Later, he relinquished this appointment on being reposted to C.D.C. H.Q., Ottawa, on May 22, 1940.



Lieut. (Qr.-Mr.) J. C. Tevendale, formerly office manager of Denco (Western) Winnipeg, Manitoba, was promoted to commissioned rank April 16, 1941. He enlisted in the Canadian Dental Corps November 16, 1939, as Quartermaster Sergeant of No. 10 Coy. (Winnipeg).

Mobile Clinic Donated

The Association of Kinsmen Clubs of Canada has presented a mobile dental clinic to the Canadian Dental Corps and, it is understood by the donors, the clinic will be attached to the 3rd Division of the active army and will proceed overseas with that division when it leaves the Dominion. The presentation was made by A. L. Galbraith of Windsor, the national president, on behalf of the members of the 85 clubs in Canada, and was accepted on behalf of the Dental Corps by Col. Frank Lott. Assisting in the presentation were

H. A. Rogers, of Toronto, founder of the Kinsmen Clubs and chairmen of the association's war services organization, and other officers.

The clinic is one of the type which has been designed by officers of the Dental Corps. It is a three and a half ton truck and is a great improvement on the 1,500-pound truck, which was able to carry the necessary equipment but had no provision for laboratories. The new style of clinic includes everything that a modern dental office requires.—*Globe and Mail* of Toronto.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA:

B.C. Dental Association

British Columbia's Annual Association meeting featured some international clinicians. This year Maurice L. Tainter, A.B., A.M., M.D., Professor of Pharmacology, College of Physicians and Surgeons, A School of Dentistry, San Francisco, California, was our guest speaker. He appeared four times. At breakfast he discussed "What's New in Dentifrices," "The Choice of a Local Anaesthetic Solution" was fully discussed at the morning session. "New Local Anaesthetic Drugs and Post Operative Care" was the subject for the afternoon, and at the evening dinner meeting Dr. Tainter took the lighter vein, "An Obscure Chapter in the History of Charlatanism." A very fluent and able speaker, Dr. Tainter has the ability to present his subject clearly and interestingly. He is a lecturer from whom every dentist can obtain practical and safe information in the full field of *Materia Medica*.

A properly constructed and shaded baked porcelain inlay is the dream of most dentists. Dr. A. W. Jeffrey, Seattle, Washington, demonstrated how to accomplish such a result—a really beautiful contoured and shaded porcelain restoration. Dr. O. A. Anderson, Seattle, showed the modern procedure of the application of the rubber dam. Dr. Anderson has demonstrated his clinic, by means of coloured films, at several American Dental Association meetings. This was one of the popular clinics of the meeting. The increased

amount of rubber dam sold by the supply houses here is an indication of the necessity of its use for better dentistry and the aim of the increasing number of men using it on the Pacific Coast. Dr. V. L. Rose, Anacortes, Wash., and Ralph Colbourne, Vancouver Ferrier Study Club, inserted Class 5 and Class 3 Gold Foil. Dr. Walter K. Sproule Vancouver, gave a chair clinic demonstrating cavity preparation for a gold inlay, taking of the wax impression and the cementation. Captain William Gibson, Canadian Dental Corps, Western Air Command, demonstrated the modern amalgam technique. The Vancouver Prosthetic Study Club showed the technique of the Tuller Fournet method of lower impression taking. This group has accomplished very favourable results by continuous meetings and study. "Radiodontic Technique and Interpretation" was well presented by the Vancouver Diagnosis Study Club by means of slides and models. This new Club has been received with such vigour that the long program which has been mapped out will benefit not only the members but dentistry as a whole. A table clinic on Anaesthesia and Exodontia by Drs. G. G. McKenzie and W. L. MacLeod was well attended. The practical suggestions displayed were of great assistance to all. The Exhibit of the Field Equipment of the Canadian Dental Corps, through the courtesy of Major E. Fraser Allen, D.D.O., M.D. No. 11, with a 100 per cent attendance of the officers and men, gave the members a real thrill.

The following are the new officers elected at the Annual Meeting: President, Dr. J. C. Foote, Victoria; President Elect, Dr. D. Hugh Munroe, Vancouver; Secretary, Dr. George C. Darts, Vancouver; Treasurer, Dr. R. L. Pallen, Vancouver; Board of Censors, Drs. P. J. Rumball, Victoria; J. R. Ingledew, Vancouver, and J. A. Chambers, New Westminster.

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We are fortunate in obtaining the services of Dr. J. Ewart Gee, of Victoria, to act as assisting Editor for British Columbia. Dr. Gee will report the activities of Vancouver Island and Victoria.

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The following are the officers elected at the Annual Meeting of the Victoria Dental Society: President, Dr. Arthur Poyntz; President Elect, Dr. J. F. Mercer; Secretary-treasurer, Dr. W. A. Allen; Executive Committee, Drs. Harold M. Hare, W. B. Milburn and Captain C. B. Mess.

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The Annual Golf Tournament of the British Columbia Dental Association was held the Sunday following the Annual Meeting. In spite of unfavourable weather there was a good turn out and very good scores were obtained. New Westminster golfers showed the members how to play their own course. Dick Butler captured the Championship, while Jack Chamber had the low net.

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Corrected Statement as to Number of Dentists

There are, at present, 331 dentists in private practice and, in addition, 31 members of the College have joined the Canadian Dental Corps, so that, normally, there would be 362 dentists practising in British Columbia.

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The Attorney-General for British Columbia on the Relation of the College of Dental Surgeons of British Columbia

V.

David Cowen and News Publishing Company Limited

In respect of court proceedings of the Attorney-General for British Columbia on the relation of the College of Dental Surgeons of British Columbia, plaintiff, and David Cowen, "Peerless Dentists," Spokane, Wash., U.S.A.,

defendant, the judgment of the Court of Appeal for British Columbia dismissing the action was upheld by the Supreme Court of Canada.

This Court held that the provisions of the then section 63 (since amended) prohibiting an unregistered person from holding himself out as being qualified or entitled to practise dentistry in the Province did not show a clear intention that such section should apply or extend to a person residing without British Columbia who, in the Province, held himself out as qualified or entitled to practise outside the Province.

Following that decision, section 63 was amended so as to make it applicable to any person not registered under the Dentistry Act, whether residing within or without British Columbia, with respect to acts done by such person *within* British Columbia.

The present action involves another defendant as well as Cowen, namely, The News Publishing Company Limited, which publishes the Nelson Daily News.

The sole issue in this case is whether subsection 2 of section 63 as enacted by section 3 is *intra vires* of the Legislature of British Columbia.

Examination for discovery, conducted by Senator J. W. deB. Farris, K.C., was held in the Court House on August 22 last. The case came on for hearing in the Supreme Court of British Columbia on September 3 and 4, 1940. Decision was reserved until September 11, 1940.

The trial judge, the Honourable Mr. Justice Murphy, in a considered judgment, held that the section was *intra vires* and granted an injunction.

From the decision of the Supreme Court of British Columbia, Dr. Cowen and the News Publishing Company Limited did, on September 24, 1940, serve Notice of Appeal to the Court of Appeal.

(It should be noted here that the present action is a test case and both parties have agreed that there shall be no cost to either side.)

From the decision of the Supreme Court of British Columbia (The Hon. Mr. Justice Murphy) DAVID COWEN and the NEWS PUBLISHING COMPANY LIMITED did appeal to the Appeal Court for British Columbia.

Those present were:

THE HON. THE CHIEF JUSTICE MACDONALD.

THE HON. MR. JUSTICE MCQUARRIE.

THE HON. MR. JUSTICE McDONALD.

THE FACTS

There is no dispute about the facts.

It is the Attorney-General's contention that all of the advertisements in question amount to a holding out, within the Province of British Columbia, of himself by the Appellant Cowen, as being qualified or entitled to practise the profession of dentistry in the City of Spokane, and a representation by the Appellant, the NEWS PUBLISHING COMPANY LIMITED, of the Appellant Cowen, as practising or as qualified or entitled or willing to practise the profession of dentistry in Spokane, and the circulating and making public of something designed or tending to induce the public to engage or employ as a dentist a person not registered under the Dentistry Act, namely, the Appellant Cowen.

This is admitted by the Appellants.

POINTS OF LAW

The section as it now stands applies only to acts done within the Province.

It makes no discrimination and applies to every person not registered under the Dentistry Act, whether residing within or without the Province.

The practice of dentistry is a matter of provincial right and the Legislature of British Columbia has full power under the British North America Act to regulate within the Province all matters in connection with the practice of such profession; and it also has the power to fix the standard of qualifications to be attained by persons practising dentistry in British Columbia for the protection of the health of residents of the Province. If this be so, the Legislature of British Columbia undoubtedly has the right to prohibit any persons over whose qualifications it has no control, from within British Columbia, inducing residents of the Province to seek dental attention from unregistered persons.

This being the object of the Act, and it appearing that the Statute did not completely achieve that object, the Legislature passed the amendment in question.

The fact that the Appellants, by their ac-

tions in advertising, supplied the clue to the defect in Statute is only a circumstance. The legislation is not aimed at the Appellants but at the local condition or "mischief" within the Province which their actions have shown to exist, and which might result in material harm.

The section does not prevent residents of British Columbia from going to anyone in the United States or elsewhere for dental treatment. There is no prohibition against trade with a foreign country or any other province. The "true nature and character" of the Dentistry Act, "its pith and substance," is that it is an Act to protect the health of the inhabitants of British Columbia, and, in those circumstances, even if it may incidentally affect trade with Spokane, it is not passed "in respect of" trade, and is, therefore, not subject to attack on that ground.

In the Supreme Court Senator Farris contended that the section in question was aimed at advertising; the Respondent the Attorney-General contends that the section is aimed at the removal of a "local evil" caused or shown to exist by the advertising of Cowen et al, and that the section only incidentally prohibits advertising in effecting the purpose for which it was passed. The "local evil" is the possibility of inhabitants of this Province having their health impaired by resorting to dentists who may or may not have attained the standard of professional skill required in this Province and in respect of whom there can be no tests to determine whether they have.

The fact that the "local evil" is caused or made manifest by advertising is purely incidental to the main purpose of the Act as amended. But even if the Statute were aimed simply and solely at the prevention of advertising within the Province by persons residing outside the Province, it would not affect the validity of the legislation.

Judgment was reserved until December 5. On that date the Appeal was unanimously dismissed and reasons for judgment handed down.

On December 10 last, the solicitors for the College was served with Notice, returnable on Friday, December 13, by the Appellants to move for special leave to appeal to the Supreme Court of Canada from the judgment of the Court of Appeal for British Columbia.

As this case involved a constitutional question, leave was granted, and it came on for hearing on February 4.

POINTS IN ISSUE

The only point in issue on this appeal was whether or not Sub-section 2 of Section 63 of the Dentistry Act, as enacted by Chapter 11, Section 3 of the Statutes of British Columbia, 1939, is *ultra vires* the Legislature of British Columbia.

The Respondent contends,—

- that the section is *intra vires*;
- that it is an enactment in respect of civil rights in the Province;
- that it is an enactment affecting only acts done within the Province;
- that it is an enactment in respect of a matter or matters of a merely local or private nature in the Province.

POINTS IN LAW

The Legislature may well consider advertising in respect of the practice of dentistry as objectionable, or that in the interests of health, only persons of whose qualifications it is satisfied under the tests provided by the Act should, by means of advertising, "hold themselves out within this Province."

The Appellants seem to submit that the Respondent has to assign some special evil to justify legislation. There may be many grounds (and no doubt are) upon which the Legislature may desire to deal with matters of a merely local or private nature within the Province, or as affecting property and civil rights within the Province, and in these spheres the powers of the Province are paramount.

ALBERTA:

Western Canada Dental Society

The biannual convention of the Western Canada Dental Society was held in Edmonton, June 2-4. The 183 men who registered pronounced this meeting a great success. Major Dwight Coons of the C.D.C., Headquarter Staff, Ottawa, represented the Corps and spoke of the splendid progress being made by this dental organization. Dr. Philip Jay of Ann Arbor, Michigan, discussed the problem of dental caries. Dr. P. G. Anderson of Toronto, outlined his technique for making gold inlays

by the direct and also the indirect method. At a later lecture he considered practical designs for fixed bridges and bridge abutments. Dr. H. A. Gilchrist of Edmonton, Professor of Prosthetic Dentistry, University of Alberta, gave a review of three years experience with the Tuller Fournet impression technique. Dr. Kenneth M. Johnson of Winnipeg, gave a paper on some phases of dental economics. The members of the Edmonton Oral Surgery Study Club presented their aseptic oral surgery technique.

The limited attendance clinics were of a particularly high order and were well attended. These included Radiodontia by John W. Clay, Calgary; Anaesthetic Solutions by C. D. Husband, Red Deer; Oral Surgery by W. H. Ibberson, Saskatoon; A Modified Fleetwood Technique for Indirect Inlays by R. R. McIntyre, Calgary; Gold Inlays by W. R. Watchler, Yorkton; Fractures by J. F. Morrison, Winnipeg; Manipulation and Condensation of Amalgam by J. D. Morrison, Medicine Hat; Amalgam Thinking by O. Whitman, Calgary; Diet in Dentistry by Wm. Orobko, Edmonton; Acrylics in Operative Dentistry by H. R. MacLean, Edmonton; Full Upper and Lower Impressions for an edentulous case by S. D. Fraser and R. C. McQuillan of Edmonton.

At the Wednesday luncheon sponsored by the Calgary Dental Society, Dr. J. M. Dixon was presented with a silver tray from this Society for his faithful service to organized dentistry throughout the years.

Following Dr. M. H. Garvin's address at the Tuesday luncheon on The Future of Dentistry in Canada, Dr. John Clay, of Calgary, presented Dr. Garvin with an onyx fountain pen set from the Dental Society of Western Canada in appreciation of his services to the Canadian Dental Association and the National Journal.

At the Delegates Meeting it was decided to urge the Canadian Dental Association to work out some plan whereby some assistance would be given to dentists and their dependents who had met with severe financial reverses and required assistance. It was also decided to urge the C.D.A. to take some further action with regard to the problem of mail-order dentures.

The President, Dr. J. M. Dixon, and all

the officers are to be congratulated upon the splendid convention which was arranged for this occasion, and which was thoroughly enjoyed by everyone who attended. The fine spirit of the Edmonton dentists was also an outstanding factor in the success of this meeting.

The following officers were elected for the ensuing term:—President, Dr. P. W. Wintthrop, Saskatoon, Sask.; 1st Vice-President, Dr. Kenneth M. Johnson, Winnipeg, Manitoba; 2nd Vice-president, Dr. V. M. Lloyd, Edmonton, Alberta; Secretary, Dr. A. J. Brett, Regina, Sask.; Treasurer, Dr. D. M. MacFarlane, Regina, Sask.

The next meeting of the Dental Society of Western Canada will be held in Regina in 1943.

Edmonton Dental Society

The regular monthly meeting of the Edmonton Dental Society was held at the Macdonald Hotel on May 6, at 6:30 p.m. Dr. H. A. Gilchrist gave a paper on Meyers technique for obtaining a bite.

The officers of the Society for 1941-1942 are as follows: President, Dr. Stanley Hodgson; Vice-president, Dr. H. R. MacLean; Secretary-treasurer, Dr. W. E. Webber; Social Convener, Dr. George Barnett.

Dental Nurses and Assistants

The Edmonton Dental Nurses' and Assistants' Association held a Silver Tea in aid of the Canadian Dental Corps at the home of Dr. and Mrs. T. Forrester MacDonald, on May 4, from 3 to 6 p.m.

Dental Assistants' Association

On May 15, the Calgary dental assistants organized an Association, the first of its kind to be formed in this City. The meeting was held in the Dental Society Room, Southam Building, and there were 11 members present. Officers were elected with the following results: President, Miss Vera White; Vice-president, Miss Geraldine McGregor; Secretary, Miss Myrtle Mackintosh; Treasurer, Miss Gwen Hilliard; Social and Press Convener, Miss Margaret Auld.

Miss Gwen Hilliard was appointed official

Delegate to the Western Canada Convention which was held June 2-4 in Edmonton. Other members who will be attending were assigned half-day sessions each of which they will report at a meeting here on June 9.

A gift and letter of appreciation will be sent to Miss Peggy Hughes in appreciation of her work in organizing this Association.

On May 22, a short meeting was held at which there were 19 members present. The Constitution was read by Miss Vera White, President. This was discussed and approved, after which members were invited by the Ash Temple Company to go to the Palliser Hotel where Mr. E. E. Rogers of Vancouver gave an illustrated address. A delicious luncheon was served later.

SASKATCHEWAN:

Dental Nurses' Association

The Regina Dental Nurses' Association held a very delightful annual banquet in the Drake Hotel recently. Court whist was played, prizes being won by Misses Mary Brett and Ruth Morrison. Wm. Water's Laboratory donated the favours for the evening.

Miss Doris McDonald was re-elected President and the executive includes the following: Vice-president, Miss Marjorie MacLennan; Secretary, Miss Evelyn Mohr; Press Reporter, Miss Ruth Morrison; Social Convener, Miss Betty Wright; Visiting Committee, Miss Betty Rothwell; Program Committee, Miss Wilma Wagg.

The regular draw was won by Miss Evelyn Mohr.

Special guests at the function included Miss Lucille Hammond and Marian Sargent, Mrs. Horne and Mrs. Fowle. Also present were Mrs. C. Thacker, Mrs. N. Scott, Mrs. O. Blake, Miss Doris McDonald and Miss Mary Brett.

R. MORRISON.

ONTARIO:

Ontario Dental Association 1941

The convention of the Ontario Dental Association again enjoyed well merited success. There were 686 members in attendance including 75 members of the Canadian Dental Corps who were guests of the Association. In addition

tion there were 80 ladies who accompanied members, 75 guests from outside Ontario and 189 exhibitors.

Dr. E. A. Grant, Vice-president of the Association, directed arrangements in the absence of President Major Ira W. Hamilton, who is serving in the Canadian Dental Corps in England. Up until the time of the convention it was hopefully expected that Major Hamilton might possibly be back in Canada for the event but he did not arrive. Dr. Grant was well supported in carrying out the convention by the various members of the Board of Governors and Secretary, Mayor Conboy.

THE NOON-DAY LUNCHEONS

Dr. Frank Martin, on behalf of the Board of Governors (of the Ontario Dental Association) presented Archivist Dr. Ed. Paul with a beautiful album in which were inscribed the names of all dentists from Ontario that were serving in His Majesty's forces. Colonel Sidney Lambert was present and made suitable dedication.

Dr. Lee Honey, of Timmins, on behalf of the Ontario Dental Association, presented Dr. Harold K. Box with an Honorary Life Membership in the Association for his fine contributions to Dental Science.

Hon. Malcolm MacDonald, High Commissioner to Canada for the United Kingdom, was guest of honour at the Tuesday luncheon. He was presented to an enthusiastic audience of well over 800, by Mayor Conboy. His Honour spoke briefly, taking advantage of his dental listeners to refer to the bad tooth in Europe—Herr Hitler—whom by the united efforts of all, we will extract from troubled and war torn Europe. He spoke also of the great morale and determination of the British people to win the war.

The guest speaker, Dr. R. Gordon Agnew, followed Mr. MacDonald and was presented by Dean Mason. Dr. Agnew is a native of Toronto, graduating in '21 Dentistry. Since graduating he has spent 17 years at Chengtu, West China, and holds the chair of Dental Pathology in West China Union University. Dr. Agnew received his Ph.D. in Dentistry at the June graduation exercises at the University of Toronto. His address was a highlight of the entire convention. It was inspirational

and an example of high thinking and leadership.

MOBILE DENTAL UNIT

During the past few months the Secretary of the Association has been receiving contributions to a mobile unit for the Dental Corps. This unit was on display during the convention, after it had been presented to Col. F. M. Lott, officer administering the Canadian Dental Corps. This is the first of its kind in Canada and is a model of efficiency and compactness. A complete dental office on wheels.

INDIVIDUAL TABLE DEMONSTRATIONS

This feature of the convention for the past number of years has been under the direction of the President of the Academy of Dentistry, Toronto. This year Dr. S. A. MacGregor was in charge and much credit is due him for his efforts. Dentists, dental nurses and assistants and the Canadian Dental Trades all took part in this feature which is one of the most interesting numbers on the convention program.

GUEST ESSAYISTS

Dr. Stanley Tylman, of Chicago, presented lecture clinics and a paper entitled, "Acrylics in Operative Dentistry." Dr. Tylman attracted a goodly number of listeners at all his meetings because of his own personality, and because of the keen interest in manipulation of this new use for "acrylic resins" so called.

Dr. Rene Rochon, from the University of Detroit and a graduate from Toronto in 1921, gave a splendid illustrated lecture on dental radiography. Dr. Rochon gave many useful and new suggestions of very practical value.

Dr. Fulton Risdon gave surgery clinics and read a paper dealing with "Diseases of the Antrum and Their Association with Focal Infection."

Dr. C. H. Best, M.A. of Banting Institute, University of Toronto, gave a lecture on certain aspects of war medical research and indicated the method of processing human blood in preparing it for storage and use in military hospitals.

Dr. Irving Ante presented lecture clinics and read a paper entitled, "Better Dentistry Combining Technical and Economic Angles." Dr. Ante's ability as a lecturer is well known and he must be commended for the great effort he

puts forth in the preparation of the elaborate illustrated material he uses to accompany his address.

LECTURE CLINICS

In a brief resumé of the convention program it is impossible to describe in any measure the excellent material presented in these classes. Two mornings of the entire meeting were given over to this, and twenty-two different groups of instructors presented illustrated lectures. Many of these groups repeated their presentations two or more times. The only complaint one hears is, "There are too many good things and one cannot get around to all of them," which is, of course, true.

EXHIBITORS

No matter where dental conventions are held, a very important part of the convention is that presented by the Dental Trades and Manufacturers. The Canadian Association is to be commended for its efforts in bringing before the profession at this time the newer equipment and materials available to dentists. We, as dentists, do not have the opportunity of visiting the dental depot except on rare occasions and if it were not for these occasions we would miss much of great value.

The University, too, deserves our praise for bringing to our attention the services it has to offer. The library, the consultation service and the technique boards. These exhibits can be of great service to those who ponder awhile in their midst.

DENTAL NURSES AND ASSISTANTS

It would be difficult to visualize a convention program in Toronto now without these immaculate young ladies taking a part. They go to no end of trouble in preparing their presentations in great detail. One could spend a whole morning and then some, in learning new ideas of real practical value for every office. Congratulations to the young ladies in white—keep it up; it will help you, too.

PRESIDENT'S SUPPER DANCE

Each year a group of ladies arrange a party for members and their wives and friends. This year it was a supper dance and the 250 who attended had a very enjoyable evening. In the absence of the President, Mrs. Ira

Hamilton received the Past President's jewel on behalf of her husband and in so doing, delighted her friends by her fitting response. The new President, Dr. E. A. Grant, was presented with his jewel of office by Dr. G. V. Morton, a Past President of the Association. Prizes given during the evening were war savings stamps. Mrs. Morton and Mrs. Hamilton were presented with a bouquet of flowers. The following ladies comprised the committee: Mrs. G. V. Morton, Convener, Mrs. Ira W. Hamilton, Ottawa, Mrs. E. A. Grant, Mrs. E. W. Paul, Mrs. Fred J. Conboy, Mrs. G. L. Frawley, Mrs. J. H. Duff, Mrs. Frank Martin, Mrs. Ross Thomas, Mrs. S. L. Honey, Timmins, Mrs. R. S. Woollatt, Mrs. E. T. Guest, Mrs. W. B. T. Amy, Mrs. J. M. Sheldon, Mrs. H. W. Hoag, Mrs. Harvey Reid, Mrs. K. R. Harris, Mrs. L. Schumacher and Mrs. S. A. MacGregor.

PUBLIC DENTAL HEALTH

In the lobby of the convention floor the Public Dental Health exhibit was on continual display. It had many features. The main attraction was a sound picture in colour—"Billy's Trip to Healthland,"—prepared by Dr. Lloyd N. Harlow, Director of Dental Services for the State of Florida. This attracted wide, favourable comment and was visited by many educationists in Toronto who were interested in the teaching of dental health to children.

Then there were a dozen or more silent films screened, as well as educational lecture slides in natural colour, prepared by Dr. I. H. Ante, University of Toronto; posters prepared by children in Toronto Public Schools were on the walls; achievements of the committee promoting dental health education were shown on a large map of Ontario; a nutrition house built by the dental nurses and assistants; educational material helpful in preparing dental addresses to lay audiences were available and many other things that must be seen to be appreciated. Dr. Ross Thomas, chairman and Dr. A. E. Higgins, secretary of this committee, are deserving of praise for their work in arranging this exhibit.

GOLF

Of course the convention closed with a game of golf. The game was under the capable

direction of Dr. J. M. Sheldon and was played at St. Andrews course. 49 members played. During dinner a hat was passed and \$25 was sent from it to the Toronto Telegram War Victims fund.

The following are prize winners: 1st Flight: Low Gross, 1st, Dr. J. M. Sheldon; 2nd, Dr. Lou. Harris; 3rd, Dr. L. Hipwell. Net, 1st, Dr. Russ Bennett (Mallory cup); 2nd, Dr. H. C. Rous; 3rd, Dr. E. Rollaston. 2nd Flight: Low Gross, 1st, Dr. H. Armstrong (O.D.A. cup); 2nd, Dr. P. Harrington; 3rd, Dr. H. Halderson; Net, 1st, Dr. Broadworth; 2nd, Dr. W. Holmes; 3rd, Dr. W. Dewar. 3rd Flight: Low Gross, 1st, Dr. E. A. Rous; 2nd, Dr. Hillier; 3rd, Dr. M. Twible; Net, 1st, Dr. B. M. Ott; 2nd, Dr. Vandervoort; 3rd, Dr. G. Paul. Kicker's prize, Dr. G. V. Morton.

O.D.A. OFFICERS 1941-1942

President, Dr. E. A. Grant, Toronto; Past President, Major Ira W. Hamilton, Ottawa; Vice-president, Dr. S. L. Honey, Timmins; Historian and Archivist, Dr. E. W. Paul; Board of Governors, Major G. L. Frawley, Drs. G. V. Tario, Pembroke; Frank Martin, Toronto; J. H. Duff, Toronto; E. A. Storey, Sarnia, and R. S. Wood, Tottenham. Secretary, Dr. Fred J. Conboy; Public Dental Health Committee, Drs. Ross Thomas, A. E. Higgins, R. D. Thornton, H. W. Reid, O. J. Yule, and T. R. Marshall, chairman.

Royal College of Dental Surgeons

The following officers were elected at the annual meeting of the Board of Directors of the R.C.D.S., held May 26: President, Franklin A. Blatchford, D.D.S., Fort William; Vice-president, G. H. Campbell, D.D.S., Orangeville; Registrar, Sydney W. Bradley, M.D.S., Ottawa; Treasurer, W. E. Willmott, D.D.S., Toronto; and Secretary, Don W. Gullett, D.D.S., Toronto.

PROSECUTION OF ILLEGAL PRACTITIONERS BY DISCIPLINE COMMITTEE

The following illegal practitioners have been prosecuted in Ontario recently:—

Beland, J. Albert—at Timmins

On April 22, 1941, J. Albert Beland appeared before Magistrate Atkinson at Timmins

and pleaded guilty to the charge of practising dentistry illegally. He was fined \$100.00 and costs. Beland disappeared without paying his fine and a warrant is out for his arrest.

Leishman, John—at Toronto

On March 14, 1941, John Leishman appeared before Magistrate Forsythe, at Toronto, and was found guilty of practising dentistry illegally. This being a second offence, he was fined \$200.00 or two months in jail. The fine was paid.

Smith, Leonard K.—at Toronto

On April 4, 1941, Leonard K. Smith appeared before Magistrate Prentice at Toronto and was convicted of practising dentistry illegally. As this was a second offence, he was fined \$200.00 or three months in jail. The fine was paid.

Sutcliffe, James—at Toronto

On April 8, 1941, James W. Sutcliffe appeared before Magistrate Keith at York County Court, Toronto, and was convicted of practising dentistry illegally. He was fined on a first offence \$100.00 or 30 days. The fine was paid.

Legal Protective Association

At the annual meeting of the Ontario Dental Association the former officers of the Dentists' Legal Protective Association were re-elected unanimously. They are as follows: President, Dr. Harold Clark, Toronto; Vice-president, Dr. T. F. Campbell, Galt; Secretary-treasurer, Dr. W. E. Willmott, Toronto. The Executive Committee consists of Dr. E. W. Paul, Toronto; Dr. J. C. Devitt, Bowmanville; Dr. A. N. Hill, Dundas; Dr. W. G. Trelford, Toronto; and Dr. Harold Campbell, Orangeville.

During the meeting of the Protective Association, Dr. Willmott outlined the progress and activities during the past year when 27 cases were considered. During the 18 years since the Association was formed, 360 cases have been handled and in only one instance was the Association unsuccessful.—*Toronto Telegram*.

Congratulations to Dr. Agnew

Congratulations to Dr. R. Gordon Agnew of Class '21 Dentistry, University of Toronto, on having received his Ph.D. in Dentistry at the June graduation exercises at the University of Toronto. Dr. Agnew holds the chair of Dental Pathology in West China University, Chengtu, China.

Dental Nurses' and Assistants' Association

The dental nurses and assistants of Ontario held their 10th Annual Convention in Toronto recently. The President, Mrs. Ferna L. Cook, of Windsor, presided with Miss Loretta McCaughey, of London, in charge of the program.

Monday morning the Table Clinics were presented in conjunction with the dentists' clinics; and Miss Christine James, of Toronto, carried off the coveted trophy for her clinic on "Practical Suggestions." One very attractive display was the "Vitamin House," presented by Helen Logan, of Toronto, and her Committee, for the Public Health showing.

The Monday afternoon meeting was officially opened by Dean A. D. A. Mason, of the Faculty of Dentistry, University of Toronto. Mrs. Cook introduced the guests of honour, including Mrs. Robina McMurdo, of New York City, official representative of the A.D.A.A., who brought greetings from all American assistants and gave a most enjoyable paper on "Ideals."

A Birthday Banquet was held in the evening, honouring the Founder, Mrs. Marion Edwards, and included as guests, Col. Frank Lott, of Ottawa; Dr. and Mrs. E. A. Grant; Mrs. Ira Hamilton; Dr. and Mrs. McGreggor; Dr. Paul Weber, of Englefield, N.J.; Dr. A. L. Cook, of Windsor, who was presented with an Honorary Membership in the Association; and Mr. Geo. Cook, husband of our President. The special prize for the "Ten Commandments for a Dental Assistant" was won by the President.

The Invocation, Tuesday morning, was given by Lt.-Col. the Rev. Sidney Lambert, O.B.E., who also dedicated a large British Flag, presented to the Association by the Founder.

Greetings were brought to the delegates by Dr. E. A. Grant, acting President of the Ontario Dental Association. Speakers included Dr. G. W. Spinks, of Hamilton, who showed fluoroscope movies illustrating "The Importance of Dental Anatomy in the Mastication of Foods;" and Dr. Paul Weber, who gave a delightful paper on "The Little Things in a Dental Assistant's Life."

At the noon luncheon the Hon. and Rev. Dr. H. J. Cody was the speaker. Dr. Martha Law presented the Clinic Cup to Miss Christine James; and Mr. Wm. McTavish presented the Poster Trophy to Miss Dorothy Scott, of Windsor.

A new Cup given by the O.D.A. was presented this year. It was awarded for the largest increase in membership during the year, and was won by the Kitchener Chapter.

Tuesday afternoon speakers included Dr. Harvey Reid, of Toronto, who spoke on the "Recall System."

Then came the business session and the election of officers. Miss Tomye Turner of Toronto, was chosen as the new President; Miss Loretta McCaughey, of London, President Elect; Miss Jean Steele, of Kitchener, Vice-president; Miss Marjorie Crees, of Sarnia, re-elected Recording Secretary; Miss Helen Campbell, of Toronto, Corresponding Secretary, and Miss Doris Gregory, of Toronto, Treasurer. A history of the Association was read by Mrs. Edwards.

Wednesday morning the Roll Call was again taken; and a very amusing and clever skit, "We, the People" was given by the Kitchener chapter. Mr. Walter Reske, of Rochester, N.Y., talked on "X-ray Problems." The delegates enjoyed a demonstration by Miss Margaret Faulkner, present World's Amateur Speed Typewriting Champion; and a talk on facial make-up by Mrs. Dudley Beard, Beauty Counsellor.

Then followed the beautiful Candle Light Installation Service of the newly elected officers, with Miss Kathleen Glancy, of Port Credit, as soloist. This solemn service was a most inspiring climax to three days of instructive sessions.

MARION EDWARDS, *Publicity Convener.*

Down Hitler With Dollars—Buy War Savings Certificates Regularly!

IN MEMORIAM

Richard Samuel Hanna, of Vancouver, B.C., aged 86, died April 30.

Dr. Hanna, familiarly known as "R.S.", was born in Simcoe County, Ontario, in 1855 where he received his early education. He answered the call of the West in 1882. Those were the days when travel was slow and long. By train he went to San Francisco, then by boat to Victoria and from Victoria by the old 'paddle wheeler' to New Westminster. There he kept books for the Burnette Sawmills for six months. Taking the boat up the Fraser to Yale he missed the stage that ran up the Fraser River Canyon every two weeks to the Caribou and Okanagan. Being a vigorous young man he walked to Kelowna, over 275 miles. At Vernon, B.C. he taught school until 1889. He saw the need for dentistry in this new country so returned East graduating from The Philadelphia Dental College in 1892. Returning West he first practised in Everett and Goldendale, Washington, until 1906 when he returned to British Columbia starting practice in Vancouver where he resided until his death. Dr. Hanna was a Conservative of the old school, an Orangeman, a Mason, and a member of the Horticultural Society for many years.

Dr. Hanna is survived by a daughter Miss Eleanor, and a son, Dr. F. G. Murray, who will carry on in his father's place.

Homer E. Agar, of Watrous, Saskatchewan, aged fifty-seven, died at the Watrous Hospital on June 2.

Born near Goderich, Ontario, he came West with his family while quite young. He graduated from North-Western University Dental School in 1907 and practised for a year in Hanley, Sask. He settled in Watrous in 1908 and became very well known and popular. He occupied the Mayor's chair for many years, only resigning about a year ago, owing to ill-health. He was prominent in Masonic and political circles, and was a charter member of the Watrous Rotary Club. For several years he was a

member of the Dental examining Board, appointed by the University of Saskatchewan.

Dr. Agar is survived by his widow, father, three sisters and two brothers.

William Wilfred Astle, of Edmonton, Alberta, aged 48, died in hospital on April 21.

He was born at Metis Beach, Quebec, and attended Stanstead College, where he excelled in athletics. He was graduated from the Royal College of Dental Surgeons, Toronto, in 1916, and immediately joined the C.A.D.C. but on account of his health was not permitted to go overseas. He was promoted to the rank of Captain and served until the end of the war.

He entered practice in Edmonton in 1919 where he has practised continuously ever since. He served for many years, half time, on the Public School Clinic.

He served as Secretary of the Edmonton Dental Society for a year. He attended Robertson United Church and was keenly interested in sports.

Dr. Astle is survived by his widow and two sons, William 18, and Frederick, 14.

Allen Clarke Michell, of Trent River, Ontario, died June 9.

Dr. Michell was graduated in dentistry from the University of Toronto in 1900 and practised his profession for some years in Toronto. Following his retirement he took up residence at Trent River where he remained until the time of his death.

Dr. Michell is survived by one sister, Miss Catharine Michell, of Toronto.

Arthur Stewart Atkinson, of Detroit, Michigan, aged 72, died May 22.

Dr. Atkinson was born in the City of York, England and came to Seaford, Ontario, when 18 years of age. He graduated from the Philadelphia Dental College and practised dentistry for 45 years in Detroit.

Dr. Atkinson is survived by his widow and three sons.

... SECTION FRANÇAISE ...

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Le Congrès de Québec

Il nous est impossible, pour le moment, de donner un compte rendu détaillé de ce magnifique congrès, parce qu'aucun rapport officiel nous est encore parvenu.

Mais pour y avoir assisté, qu'il nous soit permis de dire que jamais nous avons eu congrès aussi bien réussi. Ce fut sous tous les aspects un succès sans précédent.

ASPECT SCIENTIFIQUE

Pour employer une expression entendue sur place, ce ne fut pas un pique-nique. Les heures étaient chargées de travaux ou de conférences des plus intéressantes. Il faut aussi le dire à l'honneur des nôtres, jamais nous avons vu les confrères mettre plus de zèle et d'intérêt à tout suivre.

ASPECT SOCIAL

Disons tout de suite que nos épouses sont revenues enchantées de la splendide hospitalité québécoise.

Que dire maintenant du grand nombre de personnages officiels qui assistèrent soit à l'ouverture, soit aux divers banquets. Je dis banquets, parce que chaque dîner prenait l'aspect d'un véritable banquet, par le nombre de ses assistants et par la présence de personnages de marque à la table d'honneur. Il nous fut agréable de constater que M. le premier ministre a cru devoir lui-même représenter la province, accompagné de deux ministres, l'honorable T. Bouchard et l'honorable O. Drouin.

Montréal et Toronto étaient représentées par leurs maires respectifs. Nos deux Universités y avaient leurs représentants, celle de Québec, dans la personne de Mgr C. Roy quand M. Jean Bruchési, sous secrétaire de la province, remplaçait Mgr Olivier

Maurault de l'Université de Montréal. L'Université de Dalhousie était représentée par le Dr Woodbury doyen de la faculté de chirurgie dentaire, en même temps que président général de l'Association dentaire canadienne. Il y avait aussi des représentants de nos confrères franco-américains et américains. Et pour le nommer le dernier, disons que M. le consul de France n'oubliera jamais comment les convives répondirent sans équivoque à la santé de son pays.

Faute de temps, il nous faut bien abréger cet aperçu nécessairement très superficiel. Qu'on nous permette cependant de remercier qui de droit de tant de succès.

Sans doute, la vieille cité de Québec avec tous ses aspects pittoresques et historiques, Boischatel, Beauport, Spencerwood, etc, fut pour plusieurs un attrait irrésistible, mais il est certain que la personnalité du président, le Dr Philippe Hamel, y fut pour beaucoup. Qui dans la province ne connaît pas la distinction, l'intégrité, le courage, le désintéressement de ce modèle de professionnel. Aussi est-ce de tout le Canada et des Etats-Unis que nous avons vu accourir ses amis. Sa générosité a voulu partager avec ses collaborateurs le mérite de ses succès. Il a eu raison, vous avez été magnifiques, confrères de Québec, votre dévouement sans borne nous a fait apprécier une fois de plus la légendaire hospitalité de votre ville, vous avez fait honneur à notre profession. Acceptez pour vous tous l'hommage de notre profonde gratitude.

(La rédaction)

DR ALCIDE THIBAUDEAU.

L'Angoisse Dentaire

Essai d'Interprétation Psychanalytique

REVUE DE STOMATOLOGIE

par F.-C. LUCIANI

(suite)

Après l'enfant, c'est chez la femme que l'angoisse est le plus fréquent et cela se conçoit si l'on réfléchit que la zone psycho-végétative de la femme est de nature nettement infantile.

Or, la vie sexuelle des êtres est régie par deux facteurs antagonistes, l'un actif, *la masculinité*, l'autre passif, *la féminité*.

La masculinité est, en général, l'apanage des mâles, nous disons en général, car la loi souffre des exceptions. Elle porte la force, le courage, la bravoure. Elle ignore l'angoisse.

La féminité est en général, l'apanage des femelles, nous disons en général par la même raison que plus haut. Elle porte la faiblesse, la passivité, la tendance à l'appréhension, à l'angoisse par son côté infantile.

Nous sommes un complexe de masculinité et de féminité, étant formé à l'origine d'une cellule mâle et d'une cellule femelle. Toute diminution de masculinité fera apparaître notre féminité et vice-versa.

L'accomplissement normal de nos fonctions sexuelles développe ou entretient notre masculinité et donc, éloigne de nous toute tendance à l'angoisse.

Le refoulement de ces fonctions diminue, au contraire, notre masculinité et fait apparaître notre féminité intrinsèque et donc, la tendance à l'angoisse.

L'angoisse chez l'homme nous apparaît ainsi comme liée à une sorte de déssexualisation, d'efféminisation et justifie, en quelque sorte, l'expression de *poule mouillée* que le vulgaire applique à cette catégorie d'angoisse.

Chez les femmes, les choses se passent à peu près identiquement; mais le refoulement sexuel, en exagérant sa féminité, fait apparaître l'élément infantile qui l'accom-

pagne et par là, donne naissance à cette forme d'angoisse *infantile* si spéciale à la femme.

En résumé, le refoulement sexuel, féminise l'homme et infantilise la femme.

Voilà, selon nous, la liaison entre la libido et l'angoisse.

Pour en revenir à notre angoisse dentaire, on peut encore se poser la question : pourquoi la forme lipothymique est-elle spéciale aux hommes et la forme phobique aux femmes ?

Nous rappellerons que sous l'influence de l'amour-propre, les hommes cachent leur anxiété ; celle-ci est refoulée énergiquement par la *censure*. Il y a donc double refoulement et anxieux et sexuel, d'où hypertension psychique dans la zone psycho-végétative et décharge, symptomatique de l'angoisse : pâleur, sueurs, tachycardie, etc. . . sur la zone neuro-végétative.

Le refoulement sexuel porte avec lui la féminité, le refoulement anxieux, la masculinité, car l'homme refoule son anxiété pour affirmer devant nous sa masculinité. Devant la perspective de la souffrance possible, il y a conflit entre la masculinité qui *veut les soins* et la féminité qui *les refuse*, conflit qui constitue le contenu même de l'anxiété. Or, la seule défense naturelle contre l'angoisse, c'est la fuite. Le sexuel masculin refuse cette fuite comme déshonorante, le sexuel féminin l'exige. Le premier relève de l'instinct de conservation, le second est fonction de l'instinct sexuel refoulé, auquel les dents sont indifférentes. Dans la lutte entre ces deux instincts, c'est l'instinct sexuel, nous l'avons vu, qui, dans la nature est le plus fort, il y aura donc *fuite* non dans l'espace, mais dans le temps, sous la forme de la crise lipothymique qui mettra fin à l'angoisse.

Chez la femme nulle anxiété refoulée, nul conflit intérieur, la féminité poussée jusqu'au stade infantile, aura sa conséquence naturelle, la fuite vraie, non dans le temps, mais dans l'espace, si l'on peut dire, par sa résistance à réclamer nos soins.

Comme nous opérons dans une des zones les plus *érogènes* du corps (Freud), il arrive parfois que l'on observe chez ces patientes un mélange d'anxieux et de libidinal qui pourrait induire en tentation de jeunes confrères. S'ils y succombaient, ils perdraient à jamais leur cliente.

Le contenu libidinal de cette angoisse, nous est démontré encore par la répugnance qu'éprouvent les femmes en général, à se faire soigner par nos aimables *consoeurs*.

Lorsque nous rencontrons cette forme d'angoisse chez l'homme, nous pouvons soupçonner dans son contenu, une tendance homo-sexuelle fortement refoulée, de même que la forme lipothymique chez la femme accuse, chez cette dernière, la même tendance.

Maintenant, demandons-nous, quelle est la cause efficiente de l'angoisse dentaire.

On peut affirmer que dans les deux tiers des cas, à peu près, elle est provoquée par la crainte du tour à fraiser. Ce tour ! cauchemar des patients, leur tourniquet, leur vilebrequin, leur roulette, que sais-je encore !

Pourquoi cette horreur du tour ?

Le patient sait qu'il y a dans sa dent un organe d'une sensibilité exquise qu'il appelle LE NERF. Il le sent partout, que ce soit la dentine, l'émail, la gencive, c'est toujours *le nerf* pour lui. Or, il se dit que sa dent qui contient cette chose si délicate, va être travaillée, forée, farfouillée, par un outil aveugle, encore que plus ou moins contrôlé. Cela fait naître dans son inconscient, l'idée, ou mieux l'obsession, que l'opérateur ne saura, ou ne pourra pas, arrêter sa machine en temps voulu, ou bien que, sans le savoir ou sans le vouloir, il va atteindre son *nerf*. Ajoutez à cela l'ambiance de clinique, éveillée par la présence d'une infirmière, et la vue d'appareils à l'aspect plus ou moins terrifiant, et nous aurons tous les ingrédients qu'il faudrait pour faire pousser de l'angoisse sur un terrain propice.

Que peut-on faire du point de vue thérapeutique ?

Il est évident que tout traitement psychanalytique est à exclure comme étant en dehors et au-dessus de notre compétence.

Nous ne pouvons que recourir à un traitement symptomatique et ce traitement variera suivant la forme d'angoisse considérée.

Dans la forme lipothymique ce sera surtout aux toniques nerveux, café, alcool principalement qu'il faudra faire appel.

Un de nos patients, atteint de cette forme d'angoisse apportait toujours dans sa poche une petite fiole de cognac, dont il vidait le contenu, avant de s'asseoir sur notre fauteuil. Il avait trouvé instinctivement son meilleur remède.

Dans la forme phobique, ce seront au contraire, les sédatifs nervins, allonal, bromures, etc. . . , qui trouveront leur application.

Mais en dehors de ce traitement médicamenteux, destiné à agir momentanément, il y a lieu aussi, de suivre un traitement, ou mieux une conduite psychothérapique d'action plus durable.

D'après l'exposé que nous avons fait, il est clair que le mariage est à conseiller chez les jeunes des deux sexes. Mais il faut les mettre en garde contre les effets anxiogènes certains, particulièrement chez les femmes, des pratiques anticonceptionnelles. Freud et la plupart des psychanalistes et neurologistes insistent sur le danger pour le nervosisme féminin, des fraudes conjugales et en particulier du *coitus interruptus*.

Pendant le traitement il faudrait arriver par une douceur patiente et persuasive, à obtenir de nos patients et surtout de nos patientes, ce que Freud appelle *le transfert*, c'est-à-dire, qu'ils se livrent à nous en toute tranquillité, qu'ils nous donnent toute leur confiance, voire leur sympathie. Mais sans que ce transfert dépasse une certaine limite et en faisant converger les possibilités du patient toujours vers le médecin, jamais sur l'homme.

Nous ne regretterons pas nos efforts, car, ces patients seront pour nous d'une fidélité à toute épreuve.

La Question des Hypo-Vitaminoses C et Leur Aspect Stomatologique*

par le U. VAUTHIER, de Genève

On ne peut pas parler de vitamines sans parler de diététique. Ce sont les progrès effectués au cours du XIX^e siècle, autant par les sciences que par la médecine, qui ont fait naître la science de l'alimentation et qui ont fait rechercher par des régimes appropriés les principes nutritifs essentiels à la vie. C'est en 1928 que la vitamine C fut isolée par Szent-Gyorgy et, en 1934, qu'elle fut synthétisée par Reichenstein. Dès lors, on pouvait spécifier la teneur en vitamines des différents aliments.

L'unité physiologique d'une vitamine est celle qui prévient ou guérit les symptômes de l'avitaminose. L'unité internationale a été fixée provisoirement à Londres en 1931, par la Commission de la Société des Nations et correspond pour la vitamine C à l'activité antiscorbutique de 0, cmc. 1 de jus frais de citron décitraté.

Les aliments contiennent, en quantités très inégales, les différentes vitamines. Certains en sont complètement dépourvus (Randin).

* Travail présenté à l'A. R. P. A. genevoise en automne 1937 et au Congrès de l'A. R. P. A. Suisse à Lausanne, mars 1938.

LOCALISATION DE LA V. C. DANS L'ORGANISME HUMAIN

Humeur aqueuse.
Thymus.
Amygdales.
Foie.
Ovaires.
Corps jaune.
Placenta.
Cerveau de fœtus humain.
Surrénales.

ALIMENTS RENFERMANT
LA VITAMINE HYDRO-SOLUBLE C
(ou *antiscorbutique*):

Paprika (poivron, piment).
Citron.
Orange.
Chou.
Tomate.
Huître.
Oignon.
Laitue.
Rutabaga.
Pois frais.
Epinard.
Chou-fleur.
Raisin.
Banane.
Betterave.
Carotte nouvelle.
Haricot vert.
Rhubarbe.
Pomme de terre.
Navet.
Pomme.
Prune.
Jus de viande crue.
Lait (petit-lait).

Cerveau.
Moelle.
Suc gastrique.
Sang.
Globules blancs.
Liquide céphalo-rachidien.
Lait de femme.
Colostrum.

ALIMENTS NE CONTENANT
PAS DU TOUT DE VITAMINE C
(ou *scorbutique*):

Amidons, féculés.
Graines non germées.
Farines purifiées ou non purifiées.
Levure de bière.
Extrait de viande.
Œuf (blanc et jaune).
Graisses et huiles végétales et animales

Je désire esquisser ici un très rapide parallèle entre: vitamines, hormones et minéraux.

Les vitamines sont des composés chimico-organiques qui agissent à doses très faibles. Comme les hormones, les minéraux et les amino-acides, elles agissent à la manière de catalyseur. Les produits isolés, les extraits, ne seraient que le noyau du principe actif. Leur action se ferait sous forme de combinaisons plus complexes, d'isomères (Verne). Si un organisme humain normal se suffit à lui-même pour les hormones, il est dépendant du milieu extérieur en ce qui concerne les vitamines. Cependant, on peut administrer hormones et minéraux avec la nourriture comme une vitamine. Certains animaux, tels que le chien, le rat, la poule, réalisent eux-mêmes la vitamine C et cette élaboration se fait justement dans les glandes endocrines telles que le foie, les surrénales et le corps jaune. Le cobaye est par contre particulièrement sensible au défaut de vitamine C. Dans les tissus animaux, les vitamines ne seraient qu'entreposées. Leur synthèse ne se réaliserait que dans les végétaux.

La présence des minéraux est de même indispensable à la vie cellulaire. Les minéraux sont pour les plantes ce que les vitamines sont pour les animaux, des activateurs cellulaires et des réserves d'énergie solaire. Les vitamines créées dans les plantes sont en quelque sorte leurs hormones. Il n'y a pas de manque de vitamines chez les plantes, mais de minéraux. Par contre, les animaux sont tributaires des végétaux au point de vue des vitamines comme au point de vue de l'énergie (Kollath). La vie animale est donc subordonnée aux manifestations de la vie végétale et de la vie microbienne. La respiration, seule fonction commune aux animaux et aux végétaux, est nécessaire à la formation des vitamines. La fonction chlorophyllienne caractéristique de la vie végétale ne semble pas indispensable à la vie des vitamines (Randoïn).

Ces substances agissent donc dans l'organisme en interrétion constante, réalisant de véritables associations fonctionnelles. Aussi, M^{me} Randoïn a-t-elle proposé d'appeler les hormones "endhormones" et les vitamines "exhormones".

Il y a des vitamines d'échange qui interviennent dans le fonctionnement de l'économie, ce sont celles du groupe hydro-solubles, vitamine C, stimulant, B₁ freinant les échanges, tandis que les vitamines liposolubles joueraient un rôle dans le développement, l'édification de l'organisme. Chaque vitamine a sa tâche propre. B₁ règle les échanges d'hydrate de carbone, B₂ d'albumine, C de matières grasses. Elles peuvent être en opposition entre elles ou avec elles-mêmes, s'il y a défaut d'assimilation de l'une d'entre elles. Elles peuvent être de même en opposition avec les minéraux et les hormones, et avant d'aboutir à la maladie, interviennent des phénomènes complexes de compensation. On peut donc parler de métabolisme vitaminique comme de métabolisme minéral ou hormonal.

On sait que le nouveau-né se suffit à lui-même en vitamine C, pendant la première année. Pour Demole, l'homme en fabriquerait, mais en insuffisance pour ses besoins. Son genre de vie en serait-il la cause? Ce déficit physiologique peut-il être attribué à une surcombustion? Quoi qu'il en soit, l'homme trouve dans la nature de quoi suffire à ses besoins, en vitamines et minéraux du moins.

Si donc la vitamine est sécrétée intérieurement, elle serait une hormone. Le terme exhormone donné par M^{me} Randoïn serait donc spécieux. Les Esquimaux, en compensation de leur alimentation, se suffiraient en vitamine C. Pourtant les Hawaïens (Marsh) et les Siciliens (Hruska), malgré une nourriture riche en fruits jaunes, sont atteints de caries nombreuses et de paradentose. Il faudrait faire intervenir ici une question de race.

Le facteur antiscorbutique est très fragile, car il s'oxyde facilement à la température ordinaire. C'est un corps instable se détruisant vite en solution neutre ou alcaline et au contact de l'oxygène de l'air. Mais en milieu acide, la destruction est retardée. L'action de la chaleur s'ajoute à celle de l'oxydation, mais sans oxydation, la chaleur est destructrice en milieu alcalin, inefficace en milieu acide. La vitamine C n'est pas détruite par les rayons ultra-violet, elle est dialysable, soluble dans l'eau, l'alcool, l'acétone, insoluble dans le benzène et le chloroforme. Son maximum de stabilité se trouve entre un pH de 1, 6 à 2,2. Sa formule est C⁶H⁸O⁶ composée de deux groupes alcool et un groupe cétone et s'apparente aux hexoses dont le type est le glucose. Tous les auteurs sont d'accord pour l'appeler l'acide ascorbique ou ascorbutique.

L'acide ascorbique se présente sous forme d'une poudre blanche cristallisée d'un goût acide. Il n'est pas fermentescible, se conserve en milieu biologique et se détruirait dans l'eau pure, d'après Sévadjian. La quantité moyenne éliminée en vingt-quatre heures dans l'urine est de 26,8 à 30 mgr. au litre. Il y a de nombreux dérivés de l'acide ascorbique et de nombreux isomères. Il réduit le nitrate d'argent et le permanganate de potasse. On trouve la vitamine C dans les plantes et fruits à l'état combiné.

Le scorbut expérimental a été illustré de façon décisive par Hanke de Chicago.

Quoique nous ne puissions pas appliquer ces résultats d'une façon strictement comparative à l'homme, ces expériences n'en restent pas moins décisives quant à l'électivité du scorbut pour les capillaires et les odontoblastes de la dent et quant à l'action régénérative de la vitamine C.

Les régimes privés pendant plusieurs mois d'aliments frais provoquent peu à peu une perte d'appétit avec pâleur du visage. Une asthénie psychique et physique s'installe, puis des courbatures, de la somnolence, des palpitations, la langue devient blanche, l'haleine fétide, la peau sèche, tachée d'ecchymoses et d'œdèmes. L'anémie s'établit.

Voici la description clinique de deux cas classiques de scorbut (1):

Le premier, du docteur Moreau de Paris, est celui d'un homme de 50 ans, atteint du syndrome hémorragique classique, avec asthénie et anémie. Temps de saignement et de coagulation normaux, gencives hypertrophiques violacées, dents branlantes, haleine fétide, sérosité. Pas de leucémie. Retenu au lit depuis deux ans par un rhumatisme déformant chronique, le malade se nourrit de pâtes, viande, pain, pommes de terre, farineux, pâtisserie, presque pas de légumes et de fruits. Pour ce malade, régime insuffisant en vitamine C. Mis au régime légumes et oranges, le malade se remet de tous ces symptômes en quatre mois.

Trois semaines après, il se présente à nouveau à l'hôpital avec, comme seule manifestation, notez-le bien, une gingivite non plus sanieuse, mais simplement hyperplasique. Pas d'hémorragie cutanée. Le malade s'était remis au régime carencé.

Ajoutons que, dans la maladie de Barlow, ou scorbut infantile, on peut remarquer une pseudoparalysie douloureuse due aux hémorragies musculaires ou intraosseuses, avec fragilité osseuse. Si l'enfant n'a pas encore de dents, il n'est pas atteint de gingivite, mais il pourra montrer des ecchymoses au niveau du voile du palais et des amygdales. Il y aussi une hyperesthésie aux mouvements et au contact. Ou bien, l'enfant refuse de marcher s'il en est à cet âge. Tous ces symptômes sont généralement accompagnés d'anémie. Il existe une forme de leucémie scorbutique que Pierre Weil a très bien décrite, avec anémie grave, augmentation considérable de mono-nucléaires, qui peut conduire à la mort. L'épreuve thérapeutique par administration de jus d'oranges est souvent décisive pour la pose du diagnostic.

Dans le deuxième cas, dû à Brinch de Copenhague, il s'agit d'un homme de 49 ans, robuste, de famille saine. Il avait été hospitalisé pour une maladie de cœur. Le diagnostic clinique montrait tous les signes du scorbut, la gencive rouge, gonflée et saignante, saignements cutanés des follicules pileux, gonflement de l'articulation du genou, douleur des extrémités, ictère léger, lassitude, taches bleues aux jambes, poids normal.

Célibataire, il se nourrissait mal; le matin: café, pain; à midi: lard, œufs; le soir: pain noir, charcuterie. Il n'avait plus mangé de légumes, de pommes de terre, ni de fruits et il n'avait pas fait de repas chaud depuis plusieurs années. Sa peau était jaune. Examen de sang normal. La température entre 38 et 38.9. Sa dentition était saine (vingt-sept dents), pas de caries, deux obturations anciennes sans dépulpation, forte suroclusion, dents peu abrasées, bord gingival bleu-grisâtre et épaissi comme une tumeur. Les papilles des incisives étaient plus épaisses, pas d'ébranlement.

Deux jours, après, il meurt subitement d'une embolie de l'artère pulmonaire. A l'autopsie, on constate une hypertrophie du cœur, stase chronique du foie, reins et poumons normaux, artériosclérose correspondante à son âge.

Etant donné la mort brusque, aucun traitement anti-scorbutique n'avait encore été institué et aucune maladie infectieuse n'était venue compliquer le diagnostic.

Brinch prit pour l'examen histologique la mâchoire, une côte et un morceau de la hanche. Jusqu'ici, aucun pathologiste, n'avait fait de coupe avec du matériel frais.

Voici la description qu'en fit Brinch:

Destruction ostéoclasique du rebord alvéolaire. L'attachement circulaire du liga-

(1) Voir aussi, Gingivo-arthrites dentaires et avitaminose, M. Dechaume, *Revue de Stomatologie*, mars 1938, p. 162.

ment n'est en général pas attaqué, malgré un déchaussement dû à l'âge du défunt. Fente périodontale normale. Infiltration de cellules rondes dans la sous-muqueuse transformée en tissu de granulation au niveau des languettes (signe de chronicité). Nombreux capillaires et leucocytes (signe d'inflammation aiguë). Epithélium détérioré par des ulcérations. Fibres ligamenteuses fréquemment rompues. Parois vasculaires épaissies et calcifiées. Ostéoporose dans le tissu interalvéolaire. Transformation grasseuse du tissu médullaire. Hyperémie des vaisseaux pulpaire avec calcification des parois. Dégénérescence des odontoblastes dépourvus de canaux et de fibres de Tomes. Dépôt de dentine irrégulière sur les parois de la chambre pulpaire et du canal. Transformation de la pulpe en tissu fibreux avec formation de denticules.

Quelques auteurs ont attiré l'attention sur la présence de nombreuses calcifications pulpaire chez les paradentositiques.

Les dépôts de dentine irrégulière sont le résultat d'une réaction contre des irritations d'origine externe ou interne. Cette hypothèse correspond aux constatations faites sur des dents cariées ou obturées.

Formation en éventail du tissu intercellulaire péri-capillaire de la pulpe, du périodonte et de la gencive.

Les parois capillaires épaissies sont entourées d'une coloration en forme de coquillage dans la pulpe, les espaces médullaires et le tissu de granulation. Les fibres musculaires des vaisseaux sont épaissies et dégénérées. Ostéoporose. Résorption du rebord alvéolaire en rapport avec la paradentite marginale. Les parois alvéolaires sont ouvertes sur les espaces médullaires contenant du tissu grasseux, au niveau du traumatisme fonctionnel seulement (molaires). D'où trouble circulatoire exagéré de la région traumatisée.

Brinch, Bruske, comme Leriche, Policard et d'autres sont d'accord pour reconnaître les conditions particulières dans lesquelles se trouve le paradentium. En effet, les traumatismes fonctionnels sont ici des irritants aggravants et Brinch en particulier a remarqué que la côte et la crête iliaque ne montraient qu'une ostéoporose, compliquée, au niveau de l'os alvéolaire entourant les molaires, d'une ostéolyse qu'il met en rapport avec la surcharge et la paradentite marginale. La plupart des auteurs sont d'accord pour attribuer ces états à un trouble de l'équilibre acide-base dans le sens d'une acidose avec déficience hépato-rénale, explication logique puisqu'on place la réserve de vitamine C. dans le foie et les capsules surrénales.

Cette description correspond à celle faite par Westin qui considère ces changements comme spécifiques de l'avitaminose C. Elle correspond aussi aux clichés de Hanke.

Tous ces changements, qui sont de nature dégénérative, peuvent cependant être retrouvés isolément dans des cas sans hypo-vitaminose C. Il faut leur présence simultanée sans signe d'inflammation pour qu'ils soient pathognomoniques du scorbut latent ou manifeste. Il n'existe pas de symptômes cliniques caractéristiques du scorbut. L'état gingival n'est qu'un des symptômes. Il faut une anamnèse du malade et de sa nourriture, constatation de saignements sous-cutanés, etc. . .

Nous pouvons nous demander quelle est la cause de ces changements. Du point de vue étiologique, un fait est admis: c'est la carence dans le régime de ces malades d'aliments frais. Dans les carences partielles qui sont aujourd'hui les plus fréquentes, nous avons affaire à des dyspeptiques dont le régime est déséquilibré, ou à trouble hormonal ou encore à un trouble organique acquis. Chez l'enfant, il faut en voir la cause dans la consommation de lait stérilisé et de farine trop blutée. C'est donc la question de l'alimentation qui revient sans cesse.

L'importance des hémorragies: épistaxis, purpura des membres inférieurs, hémorragies gingivales, sous-périostées, intraosseuses, intramusculaires, etc., ainsi que les œdèmes que l'on constate à la période d'état accompagnés généralement d'anémie, sont

la manifestation de lésions sanguines, ainsi que de perturbations dans le métabolisme du fer.

En effet, le scorbut entraîne des changements importants dans les constantes du milieu intérieur. Il se produit un trouble physico-chimique des hématies et des cellules de la surrénale et une diminution de la résistance globulaire. Le sang se modifie, il contient plus d'eau de chlore, de sodium, de phosphore, de fibrogénine et d'urée, moins de sérum globuline, de potassium, de fer, etc. Le glycogène et le fer du foie diminuent, ainsi que le cholestérol. Ces perturbations ont pour conséquence un trouble des échanges et une dégénérescence des cellules de l'endothélium des capillaires dont la perméabilité est déséquilibrée. Il s'ensuit promptement une dégénérescence des odontoblastes et des ostéoblastes, par sous-nutrition.

Zimmet a trouvé la présence de vitamine C dans les amygdales, dans l'appendice, organes lymphoïdes, où elle serait mise en réserve dans le système réticulo-endothélial, auquel on attribue un rôle d'immunité. Dans les états infectieux de ces organes, Zimmet a constaté une diminution de vitamine C d'environ 50 p. 100. Par la capillaroscopie, Bober, de Munich et Bruske d'Amsterdam entre autres, ont étudié l'état des capillaires et, pour nous en tenir à la gencive, ont montré des différences morphologiques considérables suivant les états, différences qui ne tiennent pas seulement à un trouble local.

Le système capillaire jouit d'une certaine autonomie. Non muni de fibres musculaires, il reçoit des impulsions du sympathique par l'intermédiaire des cellules de Rouget qui, elles, sont douées de contractilité et régissent ainsi le passage du sang dans les capillaires. Ceux-ci sont excitables par des agents mécaniques et chimiques, oxygène vaso-constricteur, CO_2 vaso-dilatateur, ainsi que par certains produits du métabolisme cellulaire. Ainsi la désassimilation provoque une dilatation et par un apport d'oxygène du sang renouvelé, le tonus capillaire augmente. Cette dilatation peut atteindre, selon Krogh, sept cents fois le volume de l'état de repos.

Hormones, minéraux et vitamines concourent à l'équilibre vital du système capillaire. Le rôle des minéraux est plus connu. Parmi les extraits endocriniens, l'adrénaline, l'insuline, l'histamine et d'autres encore influencent à doses déterminées les parois des capillaires (Krogh). Quant aux vitamines, leur rôle n'est pas moins important. La vitamine C joue donc un rôle indispensable dans la combustion, dans l'activation des échanges d'oxygène entre les tissus et l'oxyhémoglobine et c'est par l'inter réaction harmonieuse de ces différentes substances que se maintient l'équilibre des capillaires. Elle règle le potentiel d'oxydo-réduction du suc cellulaire et préserve le protoplasma de l'oxydation dans certaines étapes du métabolisme. Elle est nécessaire à tous les âges pour les deux sexes et de ce fait n'est pas seulement un facteur d'équilibre et d'entretien, mais aussi un facteur de croissance et de calcification (Hanke).

En somme, tous les troubles de la nutrition se répercutent sur les capillaires.

Si les capillaires ne sont pas influencés directement par le système nerveux central, cependant, les expériences de Bruce ont montré qu'il y avait une relation entre les nerfs sensitifs périphériques et la dilatation des capillaires, ce qui s'explique par un réflexe d'axone, c'est-à-dire qu'une excitation d'une fibre sensitive périphérique se refléchit directement en sens centrifuge sans remonter jusqu'aux centres, au niveau d'une bifurcation se rendant à la paroi d'un capillaire et se répercute sur lui.

Il était utile de rappeler ces notions si l'on veut comprendre la sensibilité particulière, je dirai l'électivité du paradentium pour la vitamine C.

Dans ces états d'hypo-vitaminose C, tous les degrés de carence en vitamine C. et toutes les réactions complémentaires des substances synergiques peuvent être ici envisagés et donner des symptômes cliniques aussi variés que complexes. Il est certain qu'aujourd'hui les avitaminoses C, sont devenues très rares. Par contre, ces

états de carence partielle accompagnés de pluridéficiences sont beaucoup plus fréquents qu'on ne le suppose. Ici, le rôle du médecin-dentiste averti devient primordial; toute inflammation des gencives devrait attirer son attention, non pas seulement au point de vue du traitement local, mais pour les signes généraux qu'elle représente. Au cas où le médecin-dentiste n'arriverait pas à dépister par lui-même les causes de ces troubles locaux, il est de son devoir de faire appel à ses confrères médecins.

(à suivre)

Il y a une Limite

Nous entendons souvent cette exclamation: "le ciel est la limite". Est-ce bien exact? Nous craignons que ce ne soit pas toujours le cas. Plusieurs d'entre nous, cependant, sont prêts à se rendre à la limite en faisant ce qu'il faut pour assurer le succès. Nous avons présentement dans notre profession des hommes qui sont allés jusqu'au bout en rendant à la profession des services, sans proportion avec les bénéfices qu'ils en ont retirés personnellement. Ces bénéfices, faits de gloire et d'honneur furent gagnés par des heures de durs travaux souvent prolongés tard dans la nuit, soit en servant dans des comités, en fouillant les articles de revues, à écrire des éditoriaux ou en cherchant des annonces. Il y en a qui peuvent être passablement satisfaits de travailler ainsi et d'entendre dire autour d'eux combien leurs travaux sont bien faits, mais est-ce suffisant?

Cela dure depuis sept ans. Notre profession ne peut s'attendre que ce travail peut continuer ainsi indéfiniment en donnant de petites tapes dans le dos pour encourager des fidèles. Il nous faut faire quelque chose, mais quoi? Il faut que ce soit un changement dans notre organisation. Voyez-y, de sorte que votre effort, pour changer les conditions actuelles, ne s'arrête pas sur le chemin du progrès. Aucune affaire ne peut prospérer qu'avec de l'amour et des pâtes soufflées. Cependant, on voit se dessiner des tendances vers une amélioration prochaine des conditions actuelles. Dans quelques provinces on a déjà exprimé l'opinion qu'il fallait renforcer notre corps dentaire national. Il y a peu de temps, le Montreal Dental Club, a adopté une résolution favorable à un accroissement de l'aide à la A.D.C. Plus récemment encore, Ontario en a fait autant. De ces expressions d'opinions dans des résolutions d'un grand nombre de sociétés dentaires locales, des lettres individuelles et un vote pris à l'assemblée de mai de l'Association Dentaire Canadienne, il est résulté que les bureaux des directeurs de la R.C.D.S. a passé une résolution pour les mettre en état d'accorder à l'A.D.C. ce support financier accru pour 1942. Si pour l'an prochain on veut qu'un corps dentaire national plus fort devienne une réalité, il faut une action concertée des Provinces.

Notre journal et notre Association ont besoin de votre support pour corriger cet état de choses qui a atteint la limite et bien au-delà.

Communiqué du Comité National du progrès dentaire.

A VENDRE:

Deux actions du Dépôt Dentaire de Montréal: \$80.00. Dr. H. M. Sanson,
Rouyn, Qué.



Courtesy of T.C.A.

Youth Looks to the Future

Where there are planes, there you will find boys. This one watches a Trans-Canada passenger liner coming in for a landing at Stevenson Field, Winnipeg.

Comparatively soon I came to consider kindness as the paramount virtue. It can work miracles and move mountains. Of all the powers that men and women possess, this of being kind is the greatest. And deep in ourselves we seem to know that in being kind we follow a natural instinct. We seem to know that destiny means us to be kind. We have reached a point of development at which some sort of operative altruism is a necessity for our peace and well being. We must be kind, because if we are knowingly unkind we become afterwards miserable. In my own experience the kind people are the happy people.—W. B. Maxwell in "Time Gathered."



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Practical Use of Vitamins in Medical and Dental Practice*

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ADVANCES in the field of nutrition during the past few years have taken vitamins out of the class of alphabetic letters and have placed them rightly as definite compounds with definite and essential physiologic functions. Like many new discoveries, vitamins have been greatly exploited and abused in the United States at least. This fault is partly the physician's and partly the propaganda dispensed by newspapers, magazines and certain pharmaceutical houses. Physicians and dentists have only one weak excuse for allowing this exploitation to occur, that is, that advances in this field have been so rapid and often so dramatic and unconfirmed that it has been next to impossible for any physician who is busy with private practice to evaluate clearly the mass of data published.

It is impossible, of course, to comment on all of the advances in the field of vitamin therapy. In this article it is intended only to mention briefly a few of the more interesting and important observations which may be of some practical interest.

VITAMIN A

Vitamin A continues to receive considerable attention. This fat-soluble vitamin has been synthesized successfully, and recent reports indicated that there is not only a vitamin A₁ but also a vitamin A₂. Biologically, these two vitamins are identical, but chemically they are different. Vitamin A₂ is found in the livers of fresh water fish; vitamin A₁ is found in the livers of salt water fish. For all practical purposes, it is only necessary to remember the one vitamin A.

Effect of deficiency. Night blindness.—This is probably the most important effect of a mild deficiency of vitamin A. Certainly it is not common, but occasionally, it is associated with cirrhosis of the liver and in certain cases of gastrocolic fistula of long standing. The diagnosis is best made by evaluation of the clinical history, but in borderline cases the use of the photometer is indicated. In the use of the photometer, however, there are certain difficulties in accepting the readings of the instrument as a definite criterion for a deficiency of vitamin A, since there

* Read before the joint meeting of the Winnipeg Medical and Winnipeg Dental Society, Winnipeg, Manitoba, Canada, February 21, 1941.

is still much controversy among the experts in this work concerning the real value of the photometer as a measure of deficiency of vitamin A. In the treatment of this condition, 30,000 to 50,000 units of vitamin A produces, usually within twenty-four to forty-eight hours, dramatic results.

Cutaneous manifestations. — During 1940 there have been several reports on cutaneous manifestations of deficiency of vitamin A, especially among children. It is now the opinion of many that keratosis pilaris, follicular ichthyosis and other diseases of a similar nature are all manifestations of deficiency of vitamin A. In the treatment of these conditions, it is important to remember that maximal improvement with daily doses of 100,000 to 300,000 units cannot be expected until treatment has been given for two or three months.

Genito-urinary disease.—There is no supportive clinical evidence that renal or ureteral stones result from deficiency of vitamin A or that patients who have these conditions are helped by administration of vitamin A.

Effect of celiac disease on requirement of vitamin A.—There is some evidence to indicate that among patients who have celiac disease, sprue and other diseases in which steatorrhea is present, larger amounts of vitamin A are required than are required for the normal person.

Effect of hepatic disease on requirement of vitamin A.—Considerable evidence continues to indicate that the hepatic parenchyma plays a major role in the metabolism of vitamin A. Low concentrations of vitamin A are found in cases of cirrhosis and in other diseases of the liver. In such cases when severe hepatic damage is present, 10,000 to 30,000 units of vitamin A per day usually is adequate. If possible, the vitamin in these cases should be given parenterally.

Normal requirements.—About 3,000

international units of vitamin A per day is considered by most physicians to be a safe margin. This amount can be obtained by daily consumption of two glasses of milk, one egg, three pats of butter and a moderate helping of green vegetables. It has been suggested that during pregnancy, it is best to give 2 drachms (7.8 gm.) of cod liver oil in addition to the diet usually administered in order to insure adequate intake of vitamin A.

VITAMIN B COMPLEX

This complex continues to be one of the most interesting and baffling of all the fields of vitamin research. Of the now known six members of this complex, five already have been isolated and synthesized.

Thiamin (vitamin B₁). Chemical properties.—In mammalian tissues, thiamin exists as an active coenzyme B₁ pyrophosphate, which is actively concerned in the metabolism of carbohydrates. It has been demonstrated recently that a considerable portion of large doses of thiamin chloride taken into the stomach is destroyed prior to absorption and it is already well known that large doses of thiamin administered intravenously are excreted rapidly in large amounts in the urine during the first four hours. Therefore, small frequent doses appear to be utilized most efficiently.

Deficiency of thiamin.—Within the past year, deficiency of thiamin has been induced among human beings by several investigators. The symptoms of deficiency usually appear in three to six weeks. Clinical evidence usually is characterized by aching of the muscles of the calf and Achilles tendons and by paresthesia of the lower extremities. Marked fatigue, lassitude, anorexia, a burning sensation of the feet, dyspnea on exertion, palpitation, constipation, loss of weight and absence of, or decrease in, gastric acidity

also are noted. Abnormalities also are evidenced in the electrocardiogram.

Considerable investigation of the effect of thiamin in treatment of various neurologic disorders has continued, but the exact relation of thiamin to the metabolism of nerve tissue is still incompletely understood. In fact, many workers are still of the opinion that thiamin is not the antineuritic vitamin. However, most investigators of this particular subject agree that the treatment of polyneuritis should include, in addition to administration of thiamin, an ample and nutritious diet together with administration of yeast, crude liver extract and so forth in order to insure adequate supply of the entire vitamin B complex. Most workers agree that from 50 to 100 mg. of thiamin chloride each day in divided doses in addition to the vitamin B supplements is adequate treatment in most cases of polyneuritis which result from apparent deficiency of thiamin.

It has been reported that delirium tremens is the result of deficiency of thiamin. Investigators observed that when thiamin chloride was given intravenously, even in the presence of continued drinking, symptoms of delirium tremens disappeared. In cases of Korsakoff's psychosis, however, improvement was not noted after administration of thiamin hydrochloride. Some encouraging results from the use of thiamin chloride in the treatment of trigeminal neuralgia have been reported, but as yet, sufficient cases have not been assembled to make possible any clear-cut conclusions.

Equivocal results have been reported in the past from administration of thiamin to patients who had functional digestive disturbances, multiple sclerosis, dysphasia, acrodynia and diabetes mellitus.

Nicotinic acid. Chemical and physiologic properties.—This compound also bears a close relationship to an enzyme

system. Experimental studies seem to have established conclusively this relationship between nicotinic acid and factor V (cozymase I and II and perhaps other enzymes). These substances are not uniformly diminished in cases of pellagra, but the administration of nicotinic acid will increase the level of these substances in the blood of both normal persons and patients who have pellagra. Depleted contents of cozymase also are found in the blood of diabetic patients who have ketosis; some investigators have suggested that nicotinic acid is of value in such cases.

The vasodilating action of nicotinic acid has been known for some time. Clinically, this has been a most disagreeable accompaniment of the therapeutic use of this compound. It has been discovered recently that administration of amino-acetic acid will prevent vasodilatation which accompanies administration of nicotinic acid, partly through conversion of the compound to nicotinuric acid. It has been observed also that administration of nicotinic acid amide is not followed by symptoms of vasodilation. In spite of the vasodilating action of nicotinic acid, however, most investigators believe that nicotinic acid will not prove to be of much value in the treatment of peripheral vascular disorders. Indeed, its use may be dangerous.

Clinical use.—Some doubt still exists as to whether nicotinic acid is a true pellagra-preventive factor. Pellagra encountered clinically is a disease of multiple deficiencies and must be treated as such. It is well to remember that nicotinic acid alone will not prevent the recurrence of the cardinal symptoms of pellagra unless other members of the vitamin B complex also are added. The introduction of pyridoxine and pantothenic acid may be of great importance in the treatment and control of pellagra. Jolliffe and his associates reported ob-

servations in 150 cases of a syndrome characterized by clouding of the consciousness, and uncontrollable grasping and sucking reflexes, either with or without manifestations of any deficiency disease. By treatment with nicotinic acid and hydration, they were able to reduce the mortality rate in cases of this syndrome from 51.5 to 13.6 per cent. It was suggested that this syndrome represented an acute, complete lack of nicotinic acid in contrast to pellagra, which Jolliffe and his associates regarded as a chronic deficiency of nicotinic acid.

Nicotinic acid also has been suggested as of value in the treatment of Vincent's infection of the mouth, but only a few cases have been reported.

Riboflavin. Clinical deficiency.—Deficiency of riboflavin as it occurs among human beings was first reported by Sebrell and Butler. In addition to cheilosis and seborrheic accumulations at the nasolabial folds, these workers during the past year also described a specific type of glossitis which often can be recognized before other signs of deficiency of riboflavin are present. The tongue is clean, the papillae are flat rather than atrophic, and the color is definitely purplish red or magenta, as compared with the solid red tongue so often seen among patients who have a deficiency of nicotinic acid. In addition to this newly observed characteristic of deficiency of riboflavin, the authors also described certain ocular changes which nearly always are present in such a deficiency. These ocular changes can be seen easily with a slit lamp. The earliest lesion is proliferation and engorgement of the limbic plexus, which progresses to superficial vascularization of the cornea and the production of interstitial keratitis. Photophobia, congestion of the sclera, vascularization and abnormal pigmentation of the eyes, dimness of vision and actual impairment of visual acuity are relieved promptly, and

at times dramatically, by administration of riboflavin.

Pyridoxine (vitamin B₆). Clinical deficiency.—It has been confirmed that a syndrome characterized by extreme nervousness, insomnia, irritability, abdominal pain, weakness and difficulty in walking dramatically disappeared after intravenous administration of pyridoxine.

One of the most interesting reports of the possible use of pyridoxine in treatment of human diseases was that of Jolliffe on its effect in cases of Parkinson's syndrome. This author selected fifteen patients who had paralysis agitans and who were confined to bed or chair. To each of these patients, 50 or 100 mg. of pyridoxine hydrochloride was administered intravenously either every day or every other day. Of these fifteen patients, four revealed subjective and definite objective improvement and two additional patients subjective improvement only. Beneficial effects of administration of this compound were limited to lessening of rigidity and to an increase in strength. Tremor was not affected.

Pantothenic acid.—The only available reports on the effect of pantothenic acid and on its metabolism among human beings are those of Spies and his associates. These authors observed that doses of 100 mg. of calcium or sodium pantothenate could be administered intravenously to human beings without any untoward reaction or changes in blood pressure, pulse rate, temperature or respiration. It also was noted that after the intravenous injection of pantothenic acid, there was an increase of from 20 to 30 per cent in the level of riboflavin in the blood. Interestingly enough, the intravenous injection of 200 micrograms of riboflavin per kilogram of body weight was followed by an 80 per cent increase in the concentration of riboflavin in the blood and a 45 per cent increase in the level of pantothenic acid. These studies

strongly indicate that perhaps pantothenic acid is essential to human nutrition and that its function is associated closely with that of riboflavin.

ASCORBIC ACID (VITAMIN C)

Chemical and physiologic properties.—The possibility of ascorbic acid functioning in an oxidation-reduction enzyme system has been recognized for years, but experimental proof of this action is still lacking.

MacLean and his associates found that in guinea-pigs on a diet deficient in ascorbic acid, differentiation of the mesenchymal cells into osteoblasts and the stimulation of these osteoblasts to secrete bone matrix occurred. Another group of investigators found that in animals deficient in ascorbic acid the odontoblasts produced histologically normal dentine but that the quantity produced was decreased in proportion to the inadequacy of vitamin C in the diet. Others have studied the role of vitamin C in the metabolism of calcium and have observed that guinea-pigs fed orange juice stored 8 per cent more calcium from the diet than did normal control animals.

Clinical use.—During the past year the possibility that ascorbic acid may have a role in the healing of wounds after operations attracted the attention of several investigators. Although it seems logical that dietary deficiency may be a factor in the failure of wounds to heal, Crandon and Lund conducted an unusual experiment which tended to indicate that deficiency of ascorbic acid may not be specific in this respect. By dietary measures the reserves of ascorbic acid of a healthy man were totally depleted; this was evidenced by complete absence of ascorbic acid in the blood plasma, leukocytes and platelets. Although these investigators were unable to recover any ascorbic acid from a specimen of muscle removed for biopsy from the region of

the wound produced for purposes of study, this wound healed as rapidly and as firmly as that of the control subject. Microscopic examination of the specimen failed to reveal any lack of intercellular substance. Clinical evidence of scurvy was noted after the diet had been completely lacking in ascorbic acid for 132 days. When the blood levels of ascorbic acid had been zero for 141 days, another wound was made. Definite failure of healing occurred, and the tissues revealed lack of intercellular substance and of formation of capillaries. Administration of ascorbic acid brought about healing and considerable intercellular substance appeared within ten days. From these observations, it would appear that present methods of estimating the reserve of ascorbic acid are relatively crude.

It has been demonstrated that the administration of arsenic and iron to human beings caused a marked decrease in the amount of ascorbic acid in the plasma, whereas bismuth did not exert this effect. Of importance may be the observation that administration of suitable doses of ascorbic acid to persons sensitive to arsenic permitted the resumption of treatment.

Normal requirements.—The exact requirements of ascorbic acid of human beings are unknown, but most investigations indicated that the maximal intake necessary to produce saturation of the tissues is approximately 100 mg. each day. Other observations seemed to bear out the hypothesis that ascorbic acid from natural sources should be used whenever possible.

VITAMIN D

Chemical properties.—Successful synthesis of compounds related to the antirachitic vitamin has been reported, and it is hoped that a suitable product will soon be available.

Treatment of rickets.—For preventive measures, it is best to institute admin-

istration of vitamin D early and reach the full dose by at least the end of the second month of life. It is recommended that in rickets the use of various fish oil preparations in doses sufficient to furnish 1,000 U.S.P. units of vitamin D daily, or even 10,000 to 20,000 units to premature infants is desirable.

Since the elaboration of "Vitaminostoss" (crystalline vitamin D₂) therapy by Braulke in 1937, the great bulk of anti-rachitic investigation has been in this direction. Parenteral administration of 500,000 to 1,000,000 U.S.P. units of vitamin D to children who had rickets (including premature infants) was followed by uniformly rapid healing and complete absence of clinical evidence of toxicity. This method seems to have been given a clinical trial sufficiently fair to establish it as a standard procedure.

VITAMIN E

In contrast to the remarkable strides in the chemical field, little has been added to the knowledge of the physiologic role of vitamin E in living organisms. Progress has been hampered by many experimental difficulties and results and conclusions are not in agreement. As has been found to be true in regard to other vitamins, the possibility seems to exist that the tocopherols and their homologues may possess some function in the general cellular metabolism of the animal body, but this has not been proved.

Clinical use.—During the past year, clinicians have concerned themselves with the possible benefit of vitamin E to various neuromuscular disorders. Several workers have reported beneficial effects following administration of vitamin E in cases of amyotrophic lateral sclerosis and progressive muscular dystrophy. Others, however, were unable to demonstrate any improvement in cases of these diseases. The value of vitamin E in the treatment of menstrual disorders, habitual abor-

tions and so forth cannot be accepted because of lack of convincing clinical evidence.

VITAMIN K

Chemical and physiologic properties.—

The synthetic compound of vitamin K₁ is identical with 2-methyl-1,4-naphthoquinone (menadione) except that the vitamin bears a phytyl side chain in the three position (2-methyl-3-phytyl-1,4-naphthoquinone). The synthetic product is also identical with natural vitamin K₁, which is obtained from alfalfa. Vitamin K₂ is prepared from putrefied fish meal, but has not yet been synthesized. Most of the advances in the chemistry of vitamin K have been made in the study of naphthoquinone derivatives. Of those investigated, 2-methyl-1,4-naphthoquinone has proved to possess the most marked antihemorrhagic activity.

Little is known about the physiologic aspect of vitamin K, but it is well established that it plays some vital role in the metabolism of prothrombin. Its exact mode of action, however, is unknown. Among human beings, serious untoward reactions have not been observed after reasonable therapeutic doses of either natural or synthetic compounds of vitamin K. It now has been well established that a proper response to vitamin K depends on the integrity of the hepatic parenchyma.

Clinical use.—Numerous reports have appeared in the past year which tend to establish the fact that vitamin K in the form of natural concentrates of pure synthetic products which exhibit antihemorrhagic activity is useful in the prevention and control of the hemorrhagic diathesis that frequently occurs among patients who exhibit hypoprothrombinemia.

The commercial availability of synthetic compounds which possess antihemorrhagic activity has led to the general use of these materials, in many in-

stances as a substitute for the formerly employed concentrates of alfalfa and of fish meal. Several investigators reported the successful use of 2-methyl-1,4-naphthoquinone administered orally, intramuscularly and intravenously. In most cases, 1 to 4 mg. of this compound, together with 5 to 10 grains (0.3 to 0.65 gm.) of animal bile salts, constituted an adequate daily oral dose. By the intravenous route, 1 to 2 mg. was likewise an effective daily dose in most instances. The results as judged on the basis of all these reports are good except in those instances in which severe hepatic damage was present.

In the hands of most investigators, the water-soluble compound, 4-amino-2-methyl-1-naphthol hydrochloride, has proved to be just as effective when given by the intravenous route as the compound 2-methyl-1,4-naphthoquinone. Untoward reactions have not followed its administration.

It is now becoming well established that deficiency of prothrombin in the circulating blood develops in cases of intestinal disorders. Apparently deficiency of prothrombin because of inadequate intestinal absorption usually developed in cases in which it was necessary to employ a limited diet or to withhold food and perform intestinal intubation in order to control an obstructive lesion. Profuse discharge from ileac stomas or severe chronic diarrhea further complicated the situation for many of these patients.

Vitamin K and the newborn infant.—

It is generally agreed that during the first few days of an infant's life a deficiency of prothrombin exists in the circulating blood, but the cause of this deficiency is still debated. Treatment of hemorrhagic diathesis of the newborn has received considerable attention. On the basis of the work presented, it appears that a dose of from 1 to 3 mg. of 2-

methyl-1,4-naphthoquinone, or any of the other synthetic quinone compounds mentioned is sufficient in most instances to control hemorrhagic diseases among the newborn. If this dose is administered at the time of birth, it will prevent transitory hypoprothrombinemia. It is suggested that the daily administration of 2 to 4 mg. of one of these synthetic compounds to pregnant women during the last week of gestation will result in a normal level of prothrombin for the infant at birth. In many places, this type of routine treatment already has been adopted in the hope that it will prevent possible cerebral hemorrhage and subsequent hemorrhagic diathesis among newborn infants.

COMMENT AND SUMMARY

The many advances in this field of nutrition represent great effort on the part of many investigators. To these advances the public has responded very well; in fact, too well. In the United States in 1938, \$54,000,000 was spent for preparations of vitamins. One reason for this tremendous response of the public is that there is something in practically everyone that makes him want to take a pill, and this fact, together with advertisement by the press and merchants, has placed vitamin products commercially in the same class as laxatives. It is well to remember that all the vitamins in the alphabet cannot make good a deficiency in minerals, fats, proteins and carbohydrates. They are all needed. Certainly, there are many indications for synthetic vitamins in large doses and in small doses, but for the daily need, perhaps the best advice is that better and cheaper vitamins can be obtained from the grocery store than from the drug store.*

* For references the reader is referred to: Butt, H. R., and Leary, W. V.: Diseases of nutrition: review of certain recent contributions. Arch. Int. Med. 67:411-465 (Feb.) 1941.

Indirect Inlay Technique

by P. G. ANDERSON, D.D.S.

Associate in Dentistry, Faculty of Dentistry, University of Toronto

IT IS extremely interesting to note the progress in dental operative procedures. Dental anatomy as it was taught many years ago still carries the same fundamentals necessary to understand the harmonious function in a normal dentition. The principles of cavity preparation as outlined by Black—to aid in maintaining the harmonious function—are just as basic now as then. Techniques however are constantly changing.

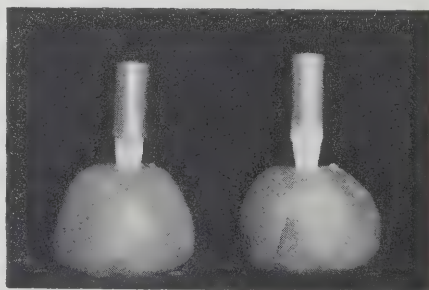
It is not the purpose here to introduce a new technique—for this is as old as the indirect idea—but to make suggestions in the technique that may smooth out some of the difficulties the indirect technique presents.

IMPRESSION BANDS

There are two popular types of impression bands used in the indirect technique, the 36-gauge annealed brass band and the copper band. Probably there is not much to choose between these two types of bands but for the greater part it would seem that the brass band may have some qualities which are more desirable. It is more rigid and lends itself well to contouring, particularly where there are extended projections or flanges on the mesial and distal portions of the tooth. Consider an impression for a mesial-occlusal-distal cavity. If the band is properly contoured, there is danger of the flanges of the softer copper springing outward when the band and compound are squeezed down on the tooth, thus slightly wedging itself beneath the contacts of the adjacent teeth.

With the more rigid annealed brass band this is not so liable to happen.

To secure an accurate impression of a well prepared cavity—example MOD—probably the most important consideration is the proper contour of the impression band. It is suggested that too frequently we use a band that is too large in circumference. The band before contouring should be small enough to slip not quite over the greatest convexity of the tooth. Fig. 1. If pressure is applied



A. B.
Figure 1

(A) The impression band is too large. It is quite snug but slips too easily over the greatest convexity of tooth. (B) The proper size of band; it does not quite slide over the greatest convexity. Note marks on the band where it draws over cavity preparation.

on the end of the band it may be forced just to the greatest convexity. This would be just about ideal because the forcing of the band onto the tooth will stretch it across the cavity outlines and leave small marks or grooves on the circumference which are the points at which one should begin to contour. Contouring simply consists of cutting or trimming out a portion of the band—in an MOD cavity—

P. G. ANDERSON



on the buccal and on the lingual in an "arched window" fashion, Fig. 2, and

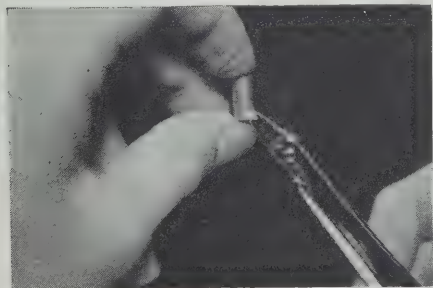


Figure 2

Trim out the "arched window" with small scissors, cutting a little to the buccal or lingual at the marks left on the band after it has been pressed down over the cavity preparation.

then trimming the mesial and distal flanges to approximately (slightly larger) the same outline as the cavity preparation on the mesial and distal. The "arched window" portion which is cut out of the

band should not be cut very much higher than the greatest convexity. This lends more support to the flanges, and at the same time this "arched window" serves as a stop on the buccal and lingual surfaces of the tooth to prevent the flanges from going too far into the gingival tissue. It might be suggested that proper contouring of the band is the most important step in successful indirect impression technique.

IMPRESSION

The next step is securing the impression. Kerr's red stick compound appears to be the most satisfactory medium. The band is filled completely and heated thoroughly in an open flame until it is very soft. Too frequently the compound is not heated enough, thus giving indefinite line angles and outline. The compound filled band is pressed down over the cavity preparation until the "arched window" of the contoured band brings



Figure 3

Press the compound filled band over the cavity preparation and pinch from buccal to lingual just the moment it is being seated.

up on the greatest convexity of the tooth. Fig. 3. At that moment the top of the band is squeezed or pinched from buccal to lingual. This point is worthy of note. It suggests why a tight fitting and stiff band is desirable. In the first instance a tight band allows a minimum of compound to pass beyond the margins of the cavity, Fig. 4; the pinching of the

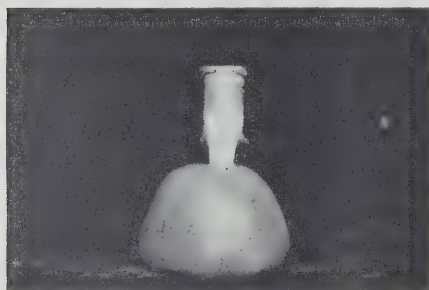


Figure 4

Even with a tight fitting band a little compound will still squeeze out at the gingival unless it is pinched at the top. Then any compound that has squeezed past will break off readily, when the band is removed, without spoiling the impression.

compound filled band from buccal to lingual widens the top of the band mesio-distally, the top of the "arched windows" resting on the greatest convexity or bell portion of the tooth, acts as a fulcrum and the mesial and distal flanges are

thrown in tightly on the mesial and distal proximal and gingival margins. Fig. 5. The compound should be chilled

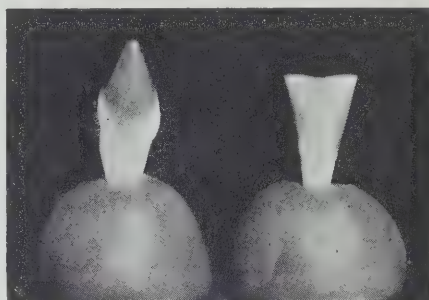


Figure 5

This illustrates the effect of pinching the band from buccal to lingual. Note that the band is widened mesio-distally at the top and is thrown in tightly at the gingival.

thoroughly before attempting to remove it. If there are no undercuts in the cavity preparation and if the tight band is properly contoured so that no part of the band goes beyond any belled or undercut part of the tooth's surface, a good impression is reasonably assured.

MODEL

No less important is the making of the model. There are three methods used; the electro-deposition of copper; the silver or copper amalgam model, and the investment model. All these are popular and are to be recommended. The investment model only will be discussed.

In making an investment model probably the most difficult part of the whole procedure is to keep it free from bubbles. Yet this is not particularly troublesome if one very elementary rule be followed in mixing the investments. Never under any circumstances—and this applies to stone, plaster or investment—begin to spatulate the mix until all the powder has become moist. This may take a minute or two of waiting but if this simple rule is observed the presence of

bubbles will be greatly reduced. Prepare a small mix of investment of a fairly creamy consistency, using room temperature water. Wash out the compound impression first with liquid green soap and then irrigate with water at room temperature. The pouring of the investment into the impression is best done



Figure 6

This illustrates a simple way of vibrating or condensing an investment model.

on a small wheel vibrator on a lathe or motor. Fig. 6. The vibrator can be made quite easily by cutting out a small bakelite wheel about an inch and one half or two inches in diameter, then with the edge of a file cut many very fine nicks on the circumference. It is advisable not to make the nicks too deep or too wide as this tends to bounce the investment instead of condense it. Mount this wheel on a chuck on the lathe. This when used with a large flat spatula serves as a very good vibrator. With the thumb and index finger hold the impression on the upper surface of the spatula. Place the other three fingers on the under surface of the spatula to act as a support and allow the end of the spatula to rest on the wheel vibrator. Begin pouring by picking up a very small bit of the investment with a small waxing spatula or other suitable instrument, and with the impression held on the larger spatula which is resting on the rotating wheel on the lathe, allow this small bit of

investment to slowly run down one side of the compound impression. Continue adding a small bit each time and the investment can be watched to see if any air bubbles are trapped as it spreads itself out over the floor of the impression. In this manner fill the impression nearly full with the investment mix and while it is still vibrating add a small bit of dry investment powder; allow it to vibrate to the bottom of the impression, then add more dry powder and still vibrate. Continue this until no more dry investment powder can be absorbed.

If the impression is not completely filled by this time add a little more of the wet mix and repeat the condensing process until sufficient is built up to allow for trimming the model and to make a handle by which the model may be held while the wax pattern is being carved. It requires about thirty minutes setting time before one can safely separate the model from the compound impression. To do this trim off the excess investment with a sharp knife by cutting from the band toward the investment so as not to damage any of the margins. Drop the impression and model into hot water. In a very short time the compound will soften and the impression can now be gently drawn away from the investment model. If small bits of compound are still adherent, dampen the model, then heat the end of a stick of red compound over an open flame and tack it to the adhering particles. They will pull off easily.

WAX PATTERN

The next step consists of making a wax pattern which is cast directly on the model. At the time the compound impression is made, get a small wax bite of the cavity preparation in inlay wax. Fig. 7. For this use just enough inlay wax as will give the occlusion with the opposing teeth and the contact points

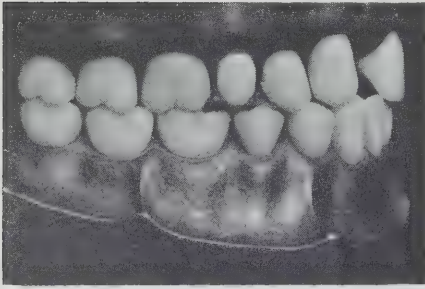


Figure 7

Use a very small amount of inlay wax when getting the wax bite.

of the adjacent ones. Gently place the wax bite on the investment model. Do not force it. If there is any tendency to bind, trim out some of the internal lines or grooves of wax so that the bite will seal evenly on the model. With a fine spatula and your favorite wax carving instruments carve up the wax pattern from this wax bite in the regular manner making sure that the wax is perfectly sealed on the model at the outline of the cavity margins. While carving be careful not to disturb the points on the wax bite where it contacted the adjacent teeth; these are the contact points of the inlay to be cast and to disturb them while carving would mean the loss of the proper mesial-distal relation. Even though this inlay wax bite which is now being carved into a wax pattern may give the approximate occlusal relation, it is at this time carved into its proper occlusal anatomy. When all the carving is completed smooth off or polish the wax with a piece of fine silk. It is now ready for investing.

SPRUES

The number of sprues to be used has always been argued but suffice it to say that in larger inlays at least two are recommended. Before placing the sprue wires and mounting on the sprue former

cut off a portion of the excess investment model. This makes investing easier, for by this method, the model with its wax pattern is invested in the inlay ring. After the wax pattern and model are mounted on the sprue former place the whole in a basin of water at room temperature. This is quite necessary for it permits a close union of the investment model and the new investment to be poured about it. After the model is thoroughly moistened remove from the water bath and paint the model and wax pattern with freshly mixed investment. Place the inlay ring in position and pour from the remainder of the mix until the ring is completely filled. In the pouring of this last mix of investment the same vigilance must be exercised in preventing the formation of air bubbles.

CASTING

After the investment has thoroughly hardened and the sprue former and sprue wires have been removed, the invested ring is then ready for the drying out process. During the baking out, it is necessary to start at a low heat continuing until most of the water is driven off, then increasing to high and holding at that temperature until the centre of the invested ring becomes a dull red glow when inspected in a dark corner or room. By looking directly down the sprue holes this reddish lustre can be seen very readily. The casting is done while the inlay ring is at this high temperature.

In this investment model technique it should be emphasized that not all investments lend themselves well to making models. Only those that have a hard stony-like texture when set, are to be recommended. This may eliminate one or two of the more popular types but there are several others that possess this desirable quality.

Save Our Way to Victory—Buy War Savings Certificates Regularly!

Canadian Dental Corps Technicians' Course

by FRANK LOTT, Colonel, Canadian Dental Corps

WHEN the Canadian Dental Corps was first formed at the beginning of the war, it was hoped that its needs for dental technicians might be met by enlistment of trained employees of the commercial laboratories. After it was found that this source of supply was proving entirely inadequate, conferences were held with various technicians' societies at which the situation was outlined and offers of different sorts were made by them to secure the men needed by the Corps. Unfortunately, these schemes, too, proved ineffectual and it was then realized that other action must be taken.

After consideration, it was decided that the only satisfactory solution of the problem was to arrange for a course of instruction to give the men the needed training. As the University of Toronto was centrally located and had the largest laboratories and the most equipment available, a conference was arranged with the Dean of the Faculty of that University at which it was suggested that such a course should be instituted. The University, without hesitation, agreed to the proposal and the following dentists offered their services to provide the instruction: Dr. I. H. Ante, Dr. J. A. Bothwell, Dr. R. G. Ellis, Dr. R. J. God-

frey, Dr. K. R. Harris, Dr. S. Jackson, Dr. T. O. Jones, Dr. F. Martin, Dr. T. R. Marshall, Dr. H. Mercer, Dr. J. Pepper, Dr. J. G. Perkin, Dr. T. N. Scott, Dr. R. S. Woollatt.

A class of 60 men was started on a six months' course on May 5th. The training being given them is a comprehensive one on general prosthetic laboratory procedures, modified from the second and third year course of the dental students. It is designed to equip the men to be average technicians. For admission to the course, a man must have the university entrance qualifications of the Province from which he comes.

The attitude of these student soldiers is excellent and with the energy and enthusiasm which they are throwing into their work, there is every reason to suppose that at the end of the six months they will be well qualified to meet the service demanded of them by the Corps. Apparently, the training is appealing to them, too, because inquiries have already begun to come in as to the possibility of admission to the next course. As yet, no application has been made for authority to run additional courses, but with the growing needs of the Corps it may become necessary to apply for such authority.

"In my opinion there is one and only one course of action which will check the increase of dental disease and degeneration which may ultimately cause the extinction of the human species. This is to elevate the dental profession to a plane where it can command the services of our best research minds to study the causes and seek for the cures of these dental evils . . . No effective measures of public education in care of the teeth can be taken until dental practitioners cease to be tinkers and learn to be scientists." — Dr. Earnest Albert Hooton, Department of Anthropology, Harvard University, *Dental News*, Milwaukee County Dental Society.

The Forum

• REPORT OF SPEECH DELIVERED BY THE HON. J. G. WINANT*

Ambassador of the United States of America
at the
English-Speaking Union
Wednesday, May 14th, 1941
(Reprinted from *The Daily Telegraph*)

THE English-Speaking Union was formed in the summer of 1918 just before the last World War came to an end. That was the first war in which all English-speaking peoples united to preserve their common ideals.

It is because of this fact that I am particularly happy to speak to you with Anthony Eden, the Secretary of State for Foreign Affairs. We worked in the pre-war days to preserve the rule of law and social justice among nations. We served in the last war in the Allied armies. Many of our friends fell in France. There they died, and many are buried, that we and our children might live in a free and peaceful world. But now across the Western Front an invader holds sway, and over the Free France of La Fayette and Foch waves the Swastika.

The common ideals of the English-speaking peoples of this world are not ideals from which other peoples of the world are excluded. They are ideals which are alien in no country that loves liberty and hates tyranny. They are ideals which are common to all men and women of this earth who do justice, who love mercy, and who walk humbly with God.

The English-speaking countries of the world are peopled by men and women of diverse nationalities and different religions. Our strength comes from diversity and our freedom is born of

tolerance—tolerance of other people's origins, other people's religions, and other people's ideas.

And that is true of England no less than the English-speaking countries overseas. It was in this little island that the Angles, the Saxons and the Normans learned to live together and call themselves Englishmen. Even the English language is a mixture of diverse tongues, and the book—the Bible—which has had a greater influence on English life and literature than any other is a book translated from tongues never spoken in this island.

In past centuries, England, like other English-speaking countries, has offered sanctuary to the oppressed, persecuted and rejected of other lands. It is therefore no accident that, in our own century, among her Prime Ministers have been those of Welsh, Scotch and American descent, or that one of the most distinguished members of her War Cabinet during the last war should have been a South African of Dutch descent.

It is probably the crowning virtue of English-speaking countries that they recognize and respect virtue wherever they find it and are not inclined to beguile themselves with the primitive and barbaric idea that they themselves have a monopoly of it. That is the reason that today throughout Europe, and throughout the world, the common people of all races and of all religions are hoping and praying and, wherever given a chance, fighting for victory for Britain and for the English-speaking countries which are rallying to Britain's aid.

For today the English-speaking peoples are again being drawn together in a struggle to preserve not only their com-

*This reprint was received by the Editor from Lieut.-Col. W. G. Trelford, Assistant Director, Dental Service.

mon heritage but the common ideals of civilized men everywhere.

Only this week in London, in the early morning hours of the Sabbath Day, enemy bombs destroyed the House of Commons room of the Parliament and smashed the altar of Westminster Abbey. These two hits seemed to me to symbolize the objectives of the dictator and the pagan. Across the street from the wreckage of these two great historic buildings of 'State and Church, Saint-Gaudens' statue of Abraham Lincoln was still standing. As I looked at the bowed figure of the Great Emancipator and thought of his life, I could not help but remember that he loved God, that he had defined and represented democratic government, and that he hated slavery.

And as an American I was proud that he was there in all that wreckage as a friend and sentinel of gallant days that have gone by, and a reminder that in this great battle for freedom he waited quietly for support for those things for which he lived and died.

With Machiavellian cunning, totalitarian tyranny has sought to divide and conquer peoples and nations that should stand together. By blackmail and terror, by intrigue and deceit, they have sought to weaken and undermine national unity in those countries whose freedom they would destroy. They have sought to revive and inflame old and discredited class and racial hatreds. They have missed no chance to make bad blood between friendly nations in order to delay and frustrate common action against international banditry and aggression which threaten the freedom of all nations.

But make no mistake! So far the totalitarians have been appallingly successful. Experience has proved that they have a way of keeping their threats and breaking their promises. They have destroyed, one by one, one free nation after another. While a few short years ago

these lawless men could have been put down by a few simple police measures, had the then free nations of the world had the will and wisdom to act together, now the forces and resources of all the remaining free nations of the world must be employed if we are to look forward to a world freed from the domination of fear and force.

For men and women of good will there is only one choice. When dictators conspire together, men and women of good will everywhere must act together. This is no time for vain regrets of futile recriminations. We have all slept, while wicked and evil men plotted destruction. We have all thought that we might save ourselves from the holocaust and that what happened to far distant countries could never happen to us.

We have all tried to make ourselves believe that we are not our brother's keeper. But we are now beginning to realize that we need our brothers as much as our brothers need us.

The freedom-loving, peace-loving peoples of this earth are coming to realize that this is not Britain's fight alone. When clever, cunning dictators are striking with lightning speed at any and every free nation that dares to stand in their way, the time has come for democratic nations to prove to the world that, while they are free to debate, they have the power and the will to act.

On the wise use of the navies of the world may hang the destinies of the free peoples of the world. A kindly Providence at this time of stress and danger has placed at the heads of the two great English-speaking peoples two men whose knowledge of the sea is probably greater than that of any statesmen of any time. The problems that are before them in the defence of their countries are not simple problems but complicated problems. In the controversy that has arisen in regard to sinkings of goods manufac-

tured in the United States, I hope that the people here and at home realize that a mere statement of the sinkings of ships from America does not tell the whole story. It only proves, as does the successful transport of troops to the Middle East, the protective power of an adequate convoy.

Such figures do not show the necessity of selection. They do not disclose what food may have to be taken from the children of Britain to give her soldiers arms. They tell only a small part of the Battle of the Atlantic and of the shipping problem to be faced in the prosecution of this total war. In total war it is total strength that counts.

We are engaged in the greatest struggle in all history to preserve freedom in the modern world. We have made our tasks infinitely more difficult because we failed to do yesterday what we gladly do today. Much that we must do today would not have been necessary had we done enough yesterday.

The longer the delay, the more protracted will be the war and the greater the sacrifices which will be required for victory.

Let us stop asking ourselves if it is really necessary to do more today. Let us, all of us, ask ourselves what more we can do today so that we may have less to do and sacrifice tomorrow. If we, all of us, will only not put off for to-

morrow what can be done today, victory for freedom will come sooner than we dare to hope.

• THE SELECTION OF CASES FOR SPACE MAINTAINERS

by JOSEPH T. COHEN, D.D.S., Institute of Child Welfare, Univ. of Minnesota.

(Summary of paper in *North-West Dentistry*, April, 1941)

1. The retention of healthy deciduous teeth until the time for them to be lost should be the aim of every dentist.

2. Permanent teeth frequently erupt in a crowded condition in the arch despite the fact that no deciduous teeth were prematurely extracted.

3. There is a natural decrease in arch dimensions in the cuspid and bicuspid segment of the arch, of from 1 to 2 mm. to provide for some loss of space in this area.

4. The premature loss of the second deciduous molar frequently results in an extensive closing of the space, forcing the succeeding permanent teeth to take an abnormal position in the arch.

5. The premature loss of the first deciduous molar seldom results in the closing of the space and the crowding of its succeeding tooth.

6. This study indicates the necessity for careful study before placing the space maintainers in the mouths of children.

Conventions

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.

Secretary, A. D. Richardson, 1240 Union Avenue, Montreal

AMERICAN ACADEMY OF PERIODONTOLOGY, HOUSTON, TEXAS, OCTOBER 23-25, 1941.

64TH ANNUAL MEETING OF THE EASTERN ONTARIO DENTAL ASSOCIATION, OCTOBER 27-28, CHATEAU LAURIER, OTTAWA, ONTARIO.

AMERICAN DENTAL ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

17TH ANNUAL SESSION OF THE AMERICAN DENTAL ASSISTANTS ASSOCIATION. TEXAS STATE HOTEL, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

• WHAT IS A PROPHYLACTIC TREATMENT?

by GEORGE R. WARNER, M.D., D.D.S.,
F.I.C.D., Denver, Colorado

(Condensed from the *Appollonian*, Jan., 1941.)

A PROPHYLACTIC treatment should tend to prevent oral disease. And, inasmuch as the statement, "a clean tooth will not decay," has proven to be unfortunate if not untrue, a prophylactic treatment has come to be considered a preventive of disease of the supporting structures of the teeth rather than of tooth decay. So one must, in such a treatment, do more than remove superficial stains and deposits from the crowns of the teeth. One must remove subgingival deposits, reduce the margins of overhanging fillings and reshape faulty contours of fillings, crowns and bridges. The occlusal surfaces of the teeth that have become so worn that they are producing detrimental stress on the opposing teeth should be reshaped so that the stress will be minimized to the point of tolerance of supporting structures of both jaws. Open contact-points, caries, defective replacements, or a need of restorations should be noted and the patient advised as to their correction. Then comes the careful polishing of cervical and interproximal areas with a hand porte polisher and tape, both charged with triple-X silex. This method of polishing prevents injury to the gingivae and provides smooth cervical areas against which the gingivae will closely snuggle, as Nature intended.

Inasmuch as the object of this type of treatment is to maintain oral structures in good health, or help to restore them to health, we must enlist the aid of the patient to this end. Most patients are interested in the story of ideal oral conditions and of a healthful masticating machine. Being interested, they are willing to co-operate when they learn that their help is essential in effecting and

maintaining desirable oral conditions. Therefore, instruction by the dentist in home care for the patient is a phase, and not the least important one, of a prophylactic treatment. But you say, "One cannot give the treatment just outlined in the time usually allotted to a treatment." Quite true. But why should we limit ourselves as to time?

If, upon examination, it is apparent that a single prophylactic treatment will not suffice to accomplish the desired result, the patient should by all means be told that a single sitting is inadequate in order to restore a healthy condition of the mouth. Why should the dentist be mealy-mouthed about this most important procedure? He does not hesitate to tell patients how many sittings will be required to make an inlay or a bridge. Certainly, a prophylactic treatment is at least as important as inlays or bridges.

What is a prophylactic treatment? It is one of the most important, if not the most important, procedures in the practice of dentistry. If we, as members of the dental profession, "defenders of the faith," believe in this answer, as we should, the results will be pleasingly apparent in the mouth and the general health of those who intrust themselves to our care.

• OPERATIVE DENTISTRY FOR CHILDREN

by WALTER T. McFALL, D.D.S., Asheville
(Condensed from the *Jour. of the Colorado S. Den. Assoc.*, per *Dentistry a Digest of Practice*.)

THE prognosis is doubtful in every deciduous tooth when caries has penetrated beyond 1 mm. into the dentine.

During an oral prophylactic treatment, I always polish all surfaces of every tooth. This polishing includes all fillings, all deep and questionable grooves or decalcified areas and deep pits. If I can polish out a deep groove or pit which does not penetrate the enamel or disk a tooth without impairment to the mesio-

distal relationship or without causing food to wedge interproximally, I always prefer to do so.

No cavity or doubtful area, such as an unpolished deep pit or groove which may break down in the future, ever escapes my immediate attention. No fissure or other structural defect is too minute to receive a permanent filling at my hands at once.

Deciduous teeth can and should be filled for permanence if they are filled at all. We should explain distinctly that all cements are treatments, not fillings. Every cavity, no matter how simple, should be sterilized before the cavity is filled. Any cavity as deep as or deeper than 1 mm. into the dentine, besides being sterilized, should receive some form of anodyne, sedative, non-conductive medicament between the pulpal wall and the filling.

The proper use of the proper kind of matrix is almost as essential to the restoration of deciduous teeth as is the care that is given to cavity preparation. Likewise, a matrix, properly fitted and adapted, is as important a factor as the manipulation of the filling material.

Complex cavities in deciduous molars must always have a broad step between the occlusal and the proximal surfaces. Compound fillings must have a sufficient mass of metal if they are to be retained and a broad chewing surface for function with at least a carved marginal ridge on the occlusal surface of the finished filling. Do not attempt to carry out the bucco- and linguo-gingival line angles to a sharp, flat line in deciduous molars.

The dove-tail step must be made on all incisors and cuspids if actual retention of the filling material is to be expected. This dove-tail step on the lingual affords a larger area for the filling material and protection against rocking the filling.

A final plea should be made for clean, new, sharp burs, spoons and chisels,

smoothstones, steady handpieces, and the accomplishment of as much as possible with each instrument on the bracket table before it is exchanged for another. Use as few instruments as possible and have all, that you can possibly need, handy or easily accessible.

• HEAT AND COLD INDICATIONS IN ORAL THERAPY

by PETER A. DEMPSEY, D.M.D., Dental Surgeon,
Massachusetts General Hospital.

(Summary of paper in *The Apollonian*, April, 1941)

INFLAMMATION is nature's response to injury and nature's front line defense to fight bacterial invasion. The leucocytes of the blood are the important factors in front line defense, while the macrophages, lymph and inflammatory exudate are the secondary reinforcements to destroy the invaders. Cold applications abstract heat, constrict the blood vessels, thereby slowing circulation, and less sensibility of nerve endings. Cold aggravates stasis, hence its application should be brief. Cold has no effect on bacterial growth and finally is analgesic. Therefore, cold applications in oral therapy are indicated in all traumatic conditions in the early stages. Heat increases circulation, induces the physiological processes associated with inflammation, namely, of defense and repair of tissue, and finally localizes the condition. Heat relaxes the tissues, thus reducing tension where localization is desired, when metabolism is an important factor, and finally where cold has not benefited the condition. The efficacy of hot and cold therapy lies in its scientific application. We should be ever mindful of the contraindications and of a too enthusiastic usage of either. Hence, in dealing with oral swellings, diagnosis is the first and most important consideration, and the choice of either hot or cold applications is based on the full understanding of the therapy which each method provides.



PRINCE EDWARD ISLAND



SASKATCHEWAN

*Editor — M. H. GARVIN, Winnipeg*

A S S O C I A T E E D I T O R S

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MANITOBA

*J. F. Morrison, Winnipeg*

BRITISH COLUMBIA

*J. S. Bricker, Vancouver*

Public Dental Health Education

by T. R. MARSHALL, Toronto

Ontario Editor of the Journal of the C.D.A.

Chairman of the Public Dental Health Committee of the Ontario Dental Association

People usually visit the dentist on their own volition, seeking relief from pain or discomfort in terms of extraction, fillings or treatment of sore gingival tissues and occasionally to have their teeth cleaned. There is, however, an increasing number of people willing to place the care of their teeth in the hands of their dentist and who are willing to co-operate with him in a program of mouth hygiene in order that he may control for them the progress of dental disease; but when this decision is made, it too often comes after diseased processes have wrought considerable havoc to the masticatory apparatus.

Recently it has been disclosed by officers of the Canadian Dental Corps that on the average, each new recruit entering the Canadian Army has seven defective teeth. It is reported in "Nutrition Notes" from Nutrition Bureau, Community Service Society of New York, that more draftees to American Military Service have been turned down as unfit for service because of dental disease than any one other physical disability.

Dr. Leuman Waugh in an address to a mixed audience of some four hundred people in Toronto, under the auspices of the Canadian Oral Prophylactic Association, made these observations, "Dental caries is the most constant and most general disease of mankind and its effects may spread eventually to any part of the body and become so severe as to result in death." This disease, according to a reliable authority, costs the American public 445 million dollars annually.

In examining children in Canadian Primary Schools it has been found that 95% of the pupils have defective teeth, with an average of one permanent tooth needing extraction. In cities and towns where a public dental service is in operation in the schools, this figure has been reduced to as low as 65% and among those affected the extent of damage by caries greatly diminished. Further, oral sepsis has been reduced from as high as 50% to nearly a vanishing point. In case of pre-school children it has been shown that in an ordinary group of children between 3 and 5 years of age 50% have cavities and the average is 5 cavities per child.

People generally are in the habit of seeking the services of a physician when they are sick. They follow the same rule and seek the services of a dentist when in dental pain. In many instances no permanent injury results from such a procedure as far as a general illness is concerned but a permanent injury nearly always results when the patient fails to visit the dentist before he has a toothache.

Dental health education is a sort of continuing process whereby people are given a better understanding of the value of good teeth maintained in health and an enlightened consciousness of the relation of such a condition to good general health. This can be accomplished in two principal ways, the second of which is supplementary to the first—(1) Privately in every dental office with every patient and (2) Publicly by suitable educational references, lectures, writings and other educational programs designed to attract the interest of those for whom they are intended.

There can be little doubt that public dental health education begins in the dental office, even if this must be acknowledged as too late for the individual concerned. Furthermore, it is the most important opportunity to raise the individual estimate and appreciation of dental health. When the new patient has been relieved of the discomfort which forced him to seek the services of a dentist, some such question is asked, "Do I need anything else, doctor?" or "What are my teeth like, doctor?" These questions imply, "Can you help me to avoid a similar experience to the one I have just had?" This is an invitation to bring to light evidence of disease or abnormality which for reasons of health, comfort and perhaps appearance, should be brought to the attention of the patient. A consciousness of such defect creates a desire to have them corrected and a desire to know how they might be prevented in future or could have been prevented in this instance.

Would it be out of place to caution against too much emphasis being

placed on the technical or restorative aspects of dental services? A short time ago a letter, received by a colleague from a prospective patient or should one say, 'customer', was sent to the writer as mirth provoking. Here are a few sentences—"I am in the market for a set of false teeth, both upper and lower. I am told you were a professor on plates at the college. I would like to have vernonite or lucitone plates with New Hue teeth. I would like to know what the price would be for the best job." One does get a bit of a smile from such a letter and many dentists have received such, but somehow the smile lapses into a sort of wry imitation as one realizes the inference—vendors of dental appliances.

There can be nothing but admiration for the skilled operative dentist as he practices the art of his profession. It is necessary that he be familiar and proficient in modern technical dental procedure if he would render a continually improving standard of dental health service to his patients; but knowledge of dental facts and technical ability to render corrective treatment are not necessarily in themselves sufficient qualifications to disseminate dental health education. To a considerable degree these qualifications are basic but in addition one should acquire an understanding of the attitude and concept of the patient and begin there to create a better dental health consciousness with a view to having him share the responsibility of controlling or preventing recurrences of diseased processes. One type of patient, perhaps a teen age boy or girl, might consult the dentist on account of toothache. What has caused this condition and how can it be prevented from occurring again? One must be prepared not only to suggest a program of regular dental care but also a practical home care routine including diet and hygiene and further create a desire and the need to faithfully carry out instructions. Another type of patient, perhaps all too rare, might be a young child without pain or apparent defect, brought in by thoughtful parents. Here is the golden opportunity to really present intensive dental health education to a parent eager for knowledge. What would I, a dentist, do for my own child? That is what the parent wants to know.

Turning now to dental health education outside the confines of the dental office, the object should ever be to create a consciousness of the value of good teeth. It should be so presented that people would understand the prevalence of dental disease, the folly of its neglect and in a general way, their own responsibility in maintaining their teeth in health.

In this regard the Canadian Dental Hygiene Council is doing a splendid work. This organization, through its field secretary and with the goodwill of the various departments of health in this Dominion, is constantly trying, by educational means, to raise the dental health consciousness of our Canadian people, with particular reference to care of children's teeth. The work of the organization is to interest public health minded citizens of the community visited, in the facts concerning the prevalence of dental disease and its ultimate effect unless kept under control. If interest in a community is

sufficiently responsive, the local dentists are enlisted to make a dental survey of all school children, from which a report is made to parents of each child and the general results are made known to all citizens through newspapers. In such a manner the C.D.H.C., a lay organization, promotes facilities for controlling the ravages of dental disease among children.

There are many other organizations, largely within the profession, throughout the Dominion, endeavouring to stimulate interest in dental health. Dr. A. E. Higgins, chairman of the Public Dental Health Committee of the Canadian Dental Association and secretary of a similar committee of the Ontario Dental Association, suggests that the Canadian Dental Association should initiate co-ordination and give assistance to the various provincial bodies and through them, to local groups in public dental health education work, thereby making the effort more effective by being nationally inspired and with a nation wide coverage. Two radio addresses, given over the Canadian Broadcasting System by Dr. Higgins, in April of this year, were in keeping with his suggestion and these may be read in the May issue of the *Journal of the Canadian Dental Association*.

Health is fast becoming a compulsory subject in the curricula of primary and secondary schools. This means that teachers should have accessible to them, suitable reference material to enable them to teach dental health. It would seem to be within the province of public dental health organizations throughout the Dominion to offer helpful co-operation to the various departments of education and boards of education, with a view to assisting in making available to the teachers suitable, fundamental teaching material. Lectures on dental health might even be appreciated at teachers' training centres and teachers' conventions.

There are many other avenues of approach in helping the child build and maintain strong healthy teeth, such as through Red Cross groups, Home and School Clubs, Mothers' Clubs, etc. The message is brought to the attention of the parent and so a consciousness of the need for dental care as opposed to dental neglect is made continually apparent.

The question of suitable material for presentation to public audiences and the manner of presentation is a very important one and one that each speaker must decide for himself. The story, however, should be simple and designed to have practical application for the group addressed. It should have a general, positive theme to build up interest in the maintenance of health of the teeth, without discussing at length the theoretical pros and cons of the cause of dental disease. When addresses can be illustrated by good lantern slides, preferably in colour well done, they are much more impressive, as they appeal not only to the ear but also to the eye. Motion pictures shown at the conclusion of an address and which serve as a review of much of the material presented by the spoken word are quite helpful in impressing the message. For a message to children I have been greatly impressed by a method used by Dr. Lloyd N. Harlow, Director of Dental Services for the

State of Florida, in his sound film entitled, 'Billy's Trip to Healthland.' This coloured picture, accompanied by suitable music and dialogue, seems very attractive. It leaves this message—'To get to Healthland Billy had to decide that he wanted to go and stay there when he arrived and as logically follows, if he decided to stay in Healthland there were certain things he must do and others he must not do'. In other words, the dentist and the nurse and the teacher could help him but he, too, must help himself to keep healthy. A successful dental health message, however presented, must have, as its motive, the creation of a greater consciousness that practically everyone needs dental care for dental health and effort is needed, from each individual, if he is to benefit.

In conclusion, dentists everywhere, as members of a health profession, should continually remind themselves that it is their duty to promote dental health education in their offices and out of their offices when appropriate opportunity presents itself. The nature of a dentist's daily task is prone to make him think mechanically in terms of fillings, extractions, bridges, dentures, treatments and so forth and for this reason many times the patient leaves the office with the impression only that he has had so many fillings done, a bridge made or whatever mechanical gadget was found to be necessary rather than with the impression of having had a dental service performed. The dental health concept must be in our minds continually if we would impart it to our public and if we would survive as a health profession.

National Income

The Cleveland Trust Company Business Bulletin of July 15 stated that the national income or the estimated total income received by all individuals in the country, published by the United States Department of Commerce had recently crossed above the 1929 level, the preceding peak, and that in view of the uptrend in wage rates and commodity prices, further advances are expected as the year progresses. It is obviously true that a similar condition is arising in Canada and has a marked bearing on the practice of dentistry.

Our first duty, as dentists, is to the Dental Corps. To those within the age limit and are physically fit the call of the Corps comes first as a patriotic duty, and in addition to this, as Colonel Lott has pointed out, the Captain in the Corps makes more than the average dentist in Canada. To those who still remain in private practice this is the time to make a survey of your methods of carrying on that practice. This is the time to talk over problems with your dental dealer with the idea of re-equipping your office, of adding the additional operating room, of engaging an extra assistant, of studying short-cuts in technique and so take advantage of general conditions which are very different from what they have been for some years.—*M.H.G.*

Calling All Dentists

It is suggested that dentists and their patients read the article on dentistry appearing in the August issue of the Ladies' Home Journal. This article was written by Dorothy Lister in co-operation with the Dental Information Bureau of New York.

NEWS FROM THE PROVINCES

ALBERTA:

Alberta Dental Association

At the final session of the Annual Conference of the Alberta Dental Association held in Calgary, June 23-24, the following officers were elected: President, Dr. Harry Freeland, of Calgary; Vice-president, Dr. C. D. Husband, of Red Deer; Secretary-treasurer and Registrar, Dr. R. A. Rooney, of Edmonton. The directors include: Dr. W. F. Keith, of Bassano; Dr. Hector McLean, of Edmonton; Dr. Gordon Miller, of Lethbridge, and Dr. J. M. Dixon, of Calgary.

It was reported by the Secretary that of 251 registered dentists in Alberta, 59 are serving in the Canadian Dental Corps.—*Alberta Herald*.

SASKATCHEWAN:

Dr. and Mrs. Ibberson Honoured

Nearly forty friends gathered at the Saskatoon Golf and Country Club for dinner on the evening of June 21 to honour Dr. and Mrs. W. H. Ibberson on the occasion of their silver wedding anniversary. Varied games were enjoyed later at the home of Dr. and Mrs. H. E. Alexander. A presentation was made to Dr. and Mrs. Ibberson.

MANITOBA:

Manitoba Dental Association

Twelve members of the Manitoba Dental Association, three from outside of Winnipeg, attended the Convention of the Western Canada Dental Society at Edmonton, June 2-4.

The Convention was another outstanding success and the committees in charge of arrangements are to be congratulated.

Three weeks later the annual gathering of the Manitoba Dental Association took the form of a two and a half day post graduate course in functional occlusion of artificial teeth.

The clinician was Dr. Frank L. Cole of the Prosthetic Department of Dentistry at Toronto University. The main feature of Dr. Cole's clinics was a demonstration of the Meyer Technique of Occlusion as worked out and taught by Dr. Fred S. Meyer of Minneapolis.

That the members present thought the subject was worth while as presented by Dr. Cole was amply proven by the sustained attendance and intense interest that was continually in evidence during all of the five sessions.

A pamphlet giving the details of the Meyer Technique has been mailed to all members of the Manitoba Dental Association. To those who were not present at the clinics the booklet may seem confusing at the first reading. The technique really is simple and a positive time saver is the final result. The dentist will not be worried by frequent visits from his patients to relieve sore spots under the dentures. If the technique is carefully followed there won't be any sore spots and the efficiency of the dentures will be something never before attained.

The annual dinner and business meeting of the Association was held in the Club Rooms of the Medical Arts Building in Winnipeg on the evening of the 24th of June.

The most important business on the agenda was a reaffirmation of a resolution passed at the annual meeting of 1933 which pledged the Association to contribute the sum of \$4.00 per registered member as annual dues to the Canadian Dental Association if, as and when

News From the Provinces

the other provincial legal dental bodies did likewise. The resolution was passed unanimously in the expectation that the increased dues would become payable in 1942.

The total registration at the clinics and business meeting was about 75 members. When one remembers that another 50 who usually attend such gatherings were unable to be present because of military duties the percentage of the total registered membership had almost a 50% representation which is very satisfactory all things considered.

ONTARIO:

C.D.A. Delegates

The following men have been appointed to represent Ontario on the Board of Delegates of the Canadian Dental Association:—Dr. F. A. Blatchford, Fort William; Dr. G. H. Campbell, Orangeville; Dr. Sydney W. Bradley, Ottawa; Dr. D. W. Gullett, Toronto.

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Resolution

At the last meeting of the Board of Directors of the Royal College of Dental Surgeons the Journal of the Canadian Dental Association was made the official publication of that body.

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Dental Nurses' Alumnae of Canada

On June 4 the Dental Nurses' Alumnae entertained 17 members of the graduating class in dental nursing at dinner in the Granite Club, Toronto. These new graduates had received their diplomas at Convocation Hall, University of Toronto, during the afternoon. The guest soloist, Beth Arnott Ellis, a former member of the Alumnae, entertained the guests with several songs, beautifully rendered. Following the dinner, a dance was held in the Oak Room, King Edward Hotel.

At the annual meeting, June 10, the following officers were elected for the coming year: President, Miss A. Lindsay; Vice-president, Miss M. Gwyn; Recording Secretary, Miss W. Leask; Corresponding Secretary, Miss H. McKinley; Assistant Corresponding Secretary,

Miss M. Jennings; Treasurer, Miss E. Courtney; Conveners of Committees: Social, Miss A. Kribs; Welfare and Sick, Miss E. Brown; Membership, Miss L. Downing; Publicity, Mrs. O. Greenwood; Advisory Board, Dean A. D. A. Mason, Dr. R. G. Ellis and Dr. Frank Martin; Auditor, Mr. K. E. Greenwood.

Plans were discussed for a bazaar to be held by the Alumnae in the fall.

HELEN MCKINLEY, *Cor. Sec.*

QUEBEC:

Montreal Dental Club

The Montreal Dental Club held its annual spring golf tournament on June 18 at the Marlborough Golf and Country Club. Some fifteen members of the profession turned out for the game. Although the number was not large nevertheless all had a good time. Dr. Arnold Mitchell was in charge of the golf and did an excellent job, as usual. He was awarded the cup for low gross, with an 83. The scores were not high due to the fact that many were playing their first game of the season.

Dr. Fred Bradley, an out-of-town member from Sherbrooke, and Dr. Earl Laurin were tied with net 75. The toss went to Dr. Laurin, giving him the trophy for low net. In the evening several members of the Canadian Dental Corps and other members joined the golfers for dinner and had a pleasant evening.

NOVA SCOTIA:

School Dental Service

Dr. W. V. Hogan was appointed assistant dentist of Halifax schools on June 5 by the school board which set his salary for a period of 11 months beginning September 1 at \$1,100. His working time will be Monday to Friday inclusive from 9 a.m. until 12 o'clock noon.

The Board further extended the dental service by the appointment of Mrs. Myrtle Beaconsdale as dental assistant at a salary of \$1,000. Her hours will be 9 to 12:30 and 2 to 3:30, Monday to Friday inclusive.—*Halifax Star*.

EMPIRE NEWS

GREAT BRITAIN:

Guy's Hospital

Once again the front quadrangle of our hospital has been ablaze with light in the small hours of the morning, and the colonnade pungent with acrid fumes. On this occasion, unfortunately, one of the wings of the hospital itself was alight. Despite the activity of the fire squad, who had already disposed of many incendiary bombs upon the roof of the Nurses' Home, one bomb gained a hold upon the roof of the Counting House. Before sufficient jets of water could be brought to bear, the structure of this historic old building was fairly alight. In addition to the Counting House, the Court Room, with its famous old oak panelling, the Superintendent's Home, and the Gazette Office, were gutted. Thanks, however, to a continuous stream of helpers, students, staff, male and female, and even some of our Borough friends, who labored incessantly to remove every article of value from this wing, remarkably little was destroyed. The records of the hospital, the oil painting from the stairway, and much furniture, were safely removed and stored in the quad, until places could be found for them all. The editors of the Gazette would like to take this opportunity of expressing their sincere gratitude to all who

so ably cleared the Gazette offices; but for their labors, the last issue of the Gazette could not have been distributed until many days after its publication; and all of our records and manuscripts were salvaged, even to the last postage stamp. Now the bare blackened walls alone remain to remind us of the stupid savagery of total warfare; but we are thankful to be able to reassure our readers that neither was the running of the hospital in any way impaired, nor were any of the wards damaged in this latest attack.—*Guy's Hospital Gazette*, May 3, 1941.

SOUTH AFRICA:

The South African Dental Journal

The South African Dental Journal has recently commenced to give greater prominence in its columns to the Afrikaans language and this change is certain to give satisfaction, not only to Afrikaans-speaking but to all members of the profession who are anxious to see good friendship and fellowship between the English and Dutch-speaking peoples of this country. The number of Afrikaans-speaking members in the profession is between 175 and 200, out of a total of approximately 700 dentists.—*D. Mag. and Oral Topics*, April, 1941.

Little Boy: "Papa, does the Chaplain pray for the officers?"

Papa: "No, son, he looks at the officers and prays for the country."

—*From Bulletin of C.D.C. M.D. No. 10.*

A man must learn to endure that patiently which he cannot avoid conveniently. Our life is composed, as is the harmony of the world, on contrary things.—Montaigne.

It isn't hard to live on a small salary if you don't spend too much trying to keep it a secret.—*St. Louis Star*.

Down Hitler With Dollars—Buy War Savings Certificates Regularly!

GENERAL NEWS

Dominion Dental Council Examination Results

Listed below are those who passed the 1941 Dominion Dental Council Examinations.

Akins, William James
Allan, K. V.
Beattie, James Preston
Cameron, Robert Bruce
Campbell, Rowland Black
Cook, Andrew Frank
Day, John Rutherford
Donnelly, Kenneth Patrick
Duke, Charles Gavin
Elliot, William Laurie
Florence, Donald Eugene
Gemeroy, Gilbert Fraser
Godfrey, Norman Thomas
Hamilton, William Scott
Holmes, Lionel Stanley
Huculak, Nicholas William
Hunter, Harold Alexander
Johnson, Roy Arnold
Kaukinen, Arne Bernard
Kennedy, Vernon William
Kilgour, James Foster
Kroshus, George Levor
Marshall, John Thomas
Mason, Herbert Stokes
MacDougall, Douglas Harvey
MacGregor, Donald Gordon
McIver, William Alvin
MacPherson, Kenneth Malcolm
Neilson, John Warrington
Oatway, Oliver Lorne
Parrott, Frederick Walter
Passalis, James
Pedlar, Frederick Gordon
Robb, George Irwin Murray
Robinson, Gilbert Boyd
Smith, James Leopold
Walker, John Goodison
Young, Louis

A. J. BRETT,
Secretary-treasurer of the
Dominion Dental Council of Canada.

Post-War Dentistry

A committee, consisting of six student representatives from each of the five Dental Schools in London, is about to be formed in order to study some of the many difficulties which will face the dental profession after the cessation of hostilities. This committee hopes eventually to arrange a conference at which dental surgeons, dentists, dental students,

dental mechanics, dental manufacturers, and, in fact, all people who are in any way connected with or interested in the future of the dental profession, will be represented.—*London Hospital Gazette*.

Pharmaceuticals to Britain

One million aspirin tablets contributed by one manufacturer, 7,500 tablets of sulfanilamide from another, varying amounts of vitamin preparations and supplies, such as gauze, adhesive tape, hypodermic needles, cotton, rubber gloves, and antiseptics—all these items were collected recently and sent to Great Britain, the Journal of the American Medical Association reports.—*Oral Hygiene*.

Houston Convention of the A.D.A.

The American Dental Association of course is unable to send the men who write about new things in dentistry to call upon you, however it has planned something that in effect and purpose is not far from that. Many of the leading clinicians, teachers, investigators and authors have agreed to prepare material for exhibit at the Houston Meeting. They will spend five days with their Scientific and Health Exhibits which will be located, in the new Sam Houston Coliseum with its 71,000 square feet of floor space, excellent lighting and ventilation facilities. There will be on display exhibits of prosthetics, oral surgery, operative dentistry, diseases of the mouth, pathology, anatomy, bacteriology, public health, education and practically every other phase of dental science and art will be well represented. The exhibitors indeed will be glad to discuss their subjects with you. Among these exhibitors will be the major prize winners from previous exhibits at the American Dental Association, American Medical Association, and at the various state and component society meetings.

Radiographs, (wet and dry specimens), microscopic slides, transparencies, models,

charts, drawings, black and white and the newer colour photographs and many other media will be used to portray vividly the work of the exhibitors.

LEO F. MARRE,
Chairman of Committee.

Impaired Judgment from Sulfanilamide

Many therapeutically effective drugs influence the physiologic mechanisms, psychomotor reactions or judgment of persons who take them. When given to patients at rest in bed such drugs have been established as beneficial to the patient and of course harmless to other persons. Under some circumstances, however, drugs may have effects potentially dangerous to both patient and community. Not long ago a locomotive engineer who was taking sulfanilamide for an infection of the bladder was involved in an accident in which considerable property damage was done and a number of people were injured. He described the event as follows:

Approaching the station where the accident occurred, a feeling of lassitude seems to have crept over me unawares and to the extent that I do not have much recollection of what went on for the last two or three miles. I was sitting on my seat, looking out and feeling that I was on the alert . . . Actually I was not on the job with all my faculties. I passed landmarks customarily used to locate position without seeing them, even to the station board; and it was only when the hazard became imminent that I was aroused out of it and became efficient.

Already physicians have ruled that airplane pilots must not fly until four days have elapsed after they have received any of the sulfanilamide group. Patients engaged in mechanical work of any kind should not take sulfanilamide except when relieved from their responsibilities. Physicians thus have a definite obligation when prescribing sulfanilamide. Patients should be cautioned preferably to stay at home and rest while taking the drug and not to drive an automobile, make any important decision or sign any papers while the drug is being administered. Such recommendations seem especially advisable in view of the in-

sidiously developing reactions of sulfanilamide when compared with such drugs as the bromides and the barbiturates.—*Journal of the American Medical Association: May 17, 1941: Vol. 116, No. 20, p. 2279; per A.D.A. Release.*

Diet Halts Tooth Decay

A diet low in carbohydrates will prevent or check the decay of teeth in more than eighty-four cases out of every hundred, according to Dr. Hermann Becks, Professor of Dental Medicine at the University of California Medical Center.

Tooth decay is caused by an acid-forming bacillus, he said. These bacilli thrive on certain carbohydrates. Eliminate them from the diet and the bacilli disappear. Tooth decay stops.

Dr. Becks reported on more than 300 cases which he had studied at the University of California's Hooper Foundation for Medical Research, over a period of two years.—*New York Times, Jan. 19, 1941.*

Doctor Upholds Group Medicine at A.M.A. Trial

Dr. Hugh Cabot, Boston surgeon and a leader in the co-operative medicine movement, testified at the government's antitrust action against the American Medical Association that group medical practice is not a new, untested innovation, but has been in existence many years.

Defense attorneys for the A.M.A., three affiliated societies and the 20 prominent physicians told the court in opening statements that group medical practice was an experiment and does not merit community dependence. The A.M.A. and the other defendants are under indictment on charges of restraining and hindering the operation of Group Health Association, Inc., a government-sponsored co-operative providing medical care for dues-paying members on a risk-sharing basis.

"Grouping of doctors for purposes of more effective practice goes back many years," Dr. Cabot testified.

He described the operation of the Mayo Clinic at Rochester, Minn., where until recently

he was consulting surgeon. Doctors there are paid on a salary basis. He said the clinic was the first private group of doctors to utilize the "advantage of close relationship" among specialized colleagues.

"The advantages of such association," he said, "was that it was easy to get access to specialist and laboratory experts, thus creating an educational process which enabled all doctors to keep abreast of scientific advances and utilize the advice of an expert consultant."

—*Chicago Daily News*: 2-7-41, per A.D.A. Release.

Annual Report of the Rockefeller Foundation

Six major fields received appropriations from the Rockefeller Foundation in 1940, states Raymond B. Fosdick, president, in A Review for 1940 (Rockefeller Foundation, New York, 1941, 64 pp.). The field of public health received \$2,750,000, natural sciences \$2,200,000, social sciences \$1,500,000, medical sciences \$1,300,000, humanities, \$1,075,000 and rural reconstruction in China \$200,000.

Mr. Fosdick reports that it is no longer possible under the regulations of the United States Treasury Department to make payments on appropriations for work in the occupied areas of Europe, including Norway, Belgium, Holland, Denmark, France and Rumania. Moreover, as the situation on the Continent of Europe has deteriorated, a large number of universities and institutes have been closed and many others "are working under conditions scarcely tolerable." The necessity of protecting the careers of scholars unable to continue work in their native lands has given rise to two Foundation programs. Under the placement program, begun in 1933, 122 scholars have been assisted to find places in the United States.

Other features of the work of the Foundation reported are the development of an experimental influenza vaccine; the establishment of a School of Public Health in the University of Michigan through grants from the Rockefeller and W. K. Kellogg Foundations; and a grant for the construction of a giant cyclotron for atomic research at the University of California.—*The Child*: April, 1941, Vol. 5, No. 10, p. 260; per A.D.A. Release.



HARRY D. COOK

Abbott Appointment

Harry D. Cook, well-known business executive, has been appointed general manager of Abbott Laboratories Limited, Montreal.

Mr. Cook was born in London, England, and has resided for seventeen years in Canada where he received his education and business experience. His entire life has been spent with the Abbott organization.

The new appointment of Mr. Cook to the post of Canadian general manager coincides with the recent greatly expanded manufacturing facilities of the company in Canada; a five-storey building was acquired in Outremont, a Montreal suburb.

Congratulations

Wm. Dalrymple, son of Dr. W. A. Dalrymple of Toronto, has been picked for promotion in the field and has been commissioned with the Essex Scotts. Lt. Dalrymple enlisted in the fall of '39 with the C.D.C. as a private, rose to a sergeant and proceeded overseas with the 1st Division Dental Company under Lt.-Col. W. G. Trelford.

Federal Trade Commission Issues Good Housekeeping Order

Climaxing nearly two years of activity the Federal Trade Commission, the end of May, issued its order against Good Housekeeping Magazine prohibiting misuse of its guarantee and testing program as well as restricting the use of seals of approval and other insignia. The Commission acted after receipt of the trial examiner's report but without oral argument or the filing of customary briefs by either side.

Misrepresentations charged were held to guarantee the quality of various advertised products or wrongly indicate the nature and extent of the company's testing of such products. The Commission found that all products, services or commercial offerings advertised in Good Housekeeping had been represented as guaranteed by the publisher, and further that advertisers in the magazine were authorized to publicize such guaranty in other publications, on labels attached to their products.

A further finding was that use and authorization by the company of many different forms of seals, emblems and insignia and the association with these of testing facilities are confusing to the average reader and have the tendency to mislead purchasers into believing that all products bearing the seal of the Magazine have been thoroughly tested and approved

and are guaranteed, when in fact they are not.

The cease and desist order directed the company not to purport to guarantee or to have tested products when such is not in fact the case. It does not prohibit use of the word "recommended" on seals or emblems, however, when adequate and thorough testing "reasonably assures quality of the product as advertised."—*Congressional Intelligence: 5-24-41; per A.D.A. Release.*

Old Age

Throughout the U.S.A. dentists are lining up behind movements which would give their profession the benefits of the old age pension provisions of the Social Security Act. A nation-wide cross-section poll of the profession by *Dental Survey* last fall showed that 77% of dentists want the Act extended to cover the profession. In the congressional hopper right now are more than 100 old age pension bills which would affect dentists—some by giving everybody a pension, others by giving dentists in institutional or governmental work a pension. No bill thus far proposes a plan specifically designed for dentists and other groups which are self-employed. But last month dentistry's friend at court, dentist-senator Henrik Shipstead, opined that he would be willing to sponsor such a bill if dentists want him to do so.—*Dental News, July, 1941.*

IN MEMORIAM

Ernest A. Harrington, of Toronto, Ont., died June 20 at his home. He was graduated from the Ontario Dental College in 1893 and practised in Toronto until three years ago when he retired. For a number of years he was in charge of the dental clinic in the T. Eaton Company stores.

Dr. Harrington is survived by three sisters and a brother.

•
Edward Toy Tinker, of Minneapolis, Minn., U.S.A., aged 66, died May 8. He was in constant demand as a clinician by all the principal dental societies in the United States and Canada.

John Murray Roland, of Hamilton, Ontario, aged 35, was drowned near Lindsay July 11, while fishing with his wife. He was graduated from the Royal College of Dental Surgeons of Ontario.

He was a member of the Glendale Golf and Country Club, and at one time was Canadian badminton champion.

Dr. Roland is survived by his wife, one son and one daughter.

•
Robert Steele, of Hamilton, Ontario, aged 84, died July 12. Dr. Steele has been retired for some time.

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Organisation et Education Dentaires

Grandes lignes d'une causerie donnée par le Dr W. W. Woodbury,
le 7 juin 1941 au congrès de Québec.

Ce fut une année d'inventaire. (Cela est peut-être dû à la célébration, l'année dernière, du centenaire de la dentisterie).

Nous avons fait le revue du passé, déterminé le présent en faisant des projets pour l'avenir.

Vous vous rappellerez que la célébration à Baltimore, l'an dernier, porta sur l'Organisation, l'Education et la Publicité. Faute de temps, je me limiterai à l'organisation et à l'éducation, notant en passant que ni l'une ni l'autre n'auraient pu progresser comme elles l'ont fait sans le développement et l'appui simultanés de la publicité.

La raison d'être des sociétés dentaires est plutôt double:

- 1o fournir l'occasion d'échanger des idéaux et d'avancer l'éducation dentaire.
- 2o Traiter les problèmes qui requièrent l'unité d'action.

Problèmes qui exigent l'unité d'action

Avant d'entrer dans une profession, il faut satisfaire à certaines exigences. Il faut s'être soumis à une certaine discipline intellectuelle. Le privilège de la pratique n'est accordé qu'à ceux qui se sont qualifiés. Les professions ont toujours été jalouses de leurs privilèges. Ce souci envers les dentistes constitue une fonction importante des organisations nationales, provinciales ou fédérales. Si tous ensemble nous ne

voyons pas à ce devoir, personne ne le fera pour nous. Mais toute profession doit se rappeler que ces privilèges sont accordés dans l'intérêt public et comportent des obligations. *Noblesse oblige** est la véritable attitude professionnelle. Tous désireux de gagner décemment notre vie et celle de nos familles, il existe chez nous un désir croissant de voir la dentisterie organisée envisager franchement les problèmes dentaires de la communauté et d'aider à trouver leur solution. Jetons un regard sur quelques-unes des questions que doit envisager la dentisterie organisée.

1—Comment la dentisterie peut-elle être mise à la portée de tous ceux qui en ont besoin?

La réponse à cette question doit être recherchée non seulement par la dentisterie, mais par le public et par les gouvernements qui représentent le public. Il doit être du ressort de la dentisterie organisée de se préparer à pouvoir donner ces conseils spécialisés que les départements de santé des gouvernements sont en droit d'exiger.

2—Est-ce que la dentisterie d'aujourd'hui est capable de satisfaire aux besoins de la communauté même si elle est grandement développée?

Bien des gens responsables pensent qu'elle ne le peut pas.

Il y a trois ans dans son rapport annuel, le président de la fondation Rockefeller exprimait cette conviction. Il disait: "Quoique l'Amérique soit à la tête de la dentisterie dans l'univers, c'est une prépondérance basée sur l'ingéniosité mécanique plutôt que sur la somme ou le caractère des recherches faites en anatomie, pathologie, et physiologie de la bouche. Il n'y a presque pas de dentistes suffisamment entraînés à faire des recherches équivalentes à celles des écoles médicales sur des problèmes de médecine et de chirurgie. Tant que nos écoles dentaires ne seront pas en état de rivaliser de plus près avec nos écoles médicales, beaucoup de cet éclat mécanique des dentistes américains restera tel et rien de plus, et l'on n'étudiera pas les mesures essentielles de guérison et de prévention".

Les conditions de guerre, avec les immenses services offerts et rendus aux forces armées, la pénurie de dentistes dans bien des centres à cause de l'enrôlement dans des corps dentaires vont vraisemblablement précipiter l'urgence de répondre à ces questions. De telles questions nous conduisent naturellement à l'enseignement dentaire. Le professeur se demande constamment: "qu'est-ce qu'un dentiste? Est-ce un technicien? Est-ce un chirurgien? Est-ce un médecin? N'est-ce pas les trois ensemble avec un peu de l'artiste et de l'ingénieur?"

Durant les derniers cent ans, les écoles dentaires—leur but, leur curriculum, leurs gradués ont été la réponse constamment changeante de la profession. Chaque expérience dans l'éducation dentaire est une nouvelle tentative de répondre à cette question, qu'est-ce qu'un dentiste.

Les exigences toujours croissantes de l'admission à la dentisterie, l'allongement graduel du cours dentaire; la coopération croissante avec la médecine, sont des phases de cette préoccupation. Un fait des plus encourageants des derniers quinze ans, ce fut de voir que les grandes universités en prenant conscience de la dentisterie, réalisent qu'il y a des problèmes dentaires à résoudre et deviennent de plus en plus constantes à encourager la recherche et l'expérience dans l'enseignement dentaire.

L'université Yale et l'université de Rochester ont notablement contribué en établissant des groupes d'études dentaires pour les recherches de laboratoire et de clinique.

L'université de Chicago a coopéré à l'établissement d'une clinique Zoller grâce à un don généreux. Voilà des efforts pour répondre aux critiques de la dentisterie que nous avons déjà citées.

Maintenant Harvard entreprend l'expérience de l'instruction médico-dentaire. Beaucoup de controverses en furent soulevées. Il est bien qu'il en soit ainsi aussi longtemps que la discussion s'en tiendra à l'issue finale. Malheureusement elle tourna

* En français dans le texte.

plutôt sur le status de la dentisterie comme profession indépendante qui à la longue est un point de vue secondaire.

Le status de la dentisterie ne sera pas réhaussé par le souci de son indépendance comme fin en elle-même.

Il sera considérablement grandi s'il produit direction et vision adéquates à rencontrer les besoins du peuple. Quelques dentistes sont très inquiets au sujet des rapports de la dentisterie et de la médecine.

Le Dr Bert Anderson de Yale a dit: "Vous ne pouvez comparer la dentisterie avec la médecine, mais seulement avec une partie comme l'ophtalmologie, car c'est de la médecine". Cela ne veut pas nécessairement dire que les services les plus efficaces seront rendus à la communauté en fusionnant les deux professions. C'est un point fort discutable et je ne crois pas qu'il y ait beaucoup à gagner en essayant de décider académiquement. La tâche maîtresse de ceux qui dirigeront les développements dentaires et formeront la politique dentaire est de voir aussi clairement que possible les besoins du peuple et deuxièmement quels moyens sont à notre dispositions pour y satisfaire. L'instruction dentaire sera efficace en autant que ces deux facteurs seront clairement compris.

La tâche des écoles dentaires est double—enseigner et chercher. Elle est la même que celle des universités dont elles sont devenues parties intégrantes.

En 1938, lors de son élection comme nouveau Chancelier de l'université d'Edinburg, Lord Tweedsmuir disait dans son adresse:

"Une université à deux grands devoirs. Elle doit transmettre la science et la faire avancer. . . L'instruction dans une université doit reposer sur les principes généraux, les propositions fondamentales, la théorie et la discipline. Elle ne peut professer d'enseigner la pratique d'une profession, car elle ne peut se tenir au pas des changements rapides". Alors songeant à la recherche et à ses relations étroites avec l'enseignement, il ajoutait: "ces deux devoirs sont fortement unis, car à moins d'avoir comme appui un centre de fortes pensées créatrices, les différentes professions pour lesquelles nous entraînons notre jeunesse deviendront stagnantes et aveugles."

La dentisterie a été adoptée par les universités. Pratiquement toutes les écoles dentaires d'Amérique sont devenues des écoles universitaires. C'est la grande réalisation de 100 ans de développement éducatif. Mais ce n'est qu'un commencement. La dentisterie aspire à devenir une profession instruite, mais elle est bien jeune. Harlan H. Horner, secrétaire du conseil d'éducation de l'Association Dentaire Américaine, disait récemment: "L'éducation dentaire atteindra à temps sa pleine et légitime position dans l'université, grâce à la joyeuse bonne volonté des universités à la lui accorder et aussi à un véritable mérite dans la réalisation. Pour commander un support universitaire tel qu'accordé à la médecine et en l'occurrence, être capable de subir l'épreuve de la discipline universitaire telle qu'appliquée aux autres écoles professionnelles, l'enseignement dentaire devra se transformer par l'intérieur et se revêtir consciencieusement de tous les apprêts universitaires. La tendance dans cette direction est évidente et pleine d'espérance".

Voici un terrain d'encouragement. Il n'y a pas de place pour la suffisance. Nous avons progressé, mais nous n'avons pas atteint le but. A moins d'être en état de pouvoir continuer à professer, nos chances se développeront plus rapidement qu'il nous sera donné d'en profiter. De fortes réclamations ont été faites par la dentisterie et pour elle. "La communauté attend de nous le plus grand effort pour les justifier".

Traduction du Dr A. THIBAudeau.

La Question des Hypo-Vitaminoses C et Leur Aspect Stomatologique

par le U. VAUTHIER, de Genève
(suite)

EPREUVE DE SATURATION

La méthode de titration de Tillmann consiste dans la mesure du pouvoir décolorant qu'exerce sur un échantillon de 2 cc. d'urine, acidifié par quelques gouttes d'acide acétique glacial, une solution titrée de 2,6 dichloro-phénol-indo-phénol qu'on laisse s'écouler d'une burette.

En présence d'acide ascorbique, le réactif qui est bleu en milieu alcalin et rose en milieu acide se décolore immédiatement. On dissout une tablette de 2,6 dichloro-phénol dans 50 cc. d'eau distillée. Renouveler la solution chaque jour. Si l'analyse fournit un taux d'acide ascorbique inférieur à la normale, on procède à l'épreuve de saturation. Elle permet de mesurer l'étendue du déficit en vitamine C au moyen d'un bilan sommaire, d'une part, la quantité de vitamine C administrée, diminuée d'autre part de la quantité retrouvée dans les urines. La différence est la quantité retenue, déficit ou besoin supplémentaire. On n'est pas d'accord sur le point de savoir quand la saturation est réalisée. Il s'agit de retrouver dans les urines une quantité d'acide ascorbique variant de 20 à 80 p. 100 de la quantité administrée, suivant les auteurs. Pratiquement, cela importe peu d'après Demole.

Le degré d'hypo-vitaminose se déduit du nombre de jours nécessaires pour saturer l'organisme à raison de 300 mgr. d'acide ascorbique par jour, c'est-à-dire jusqu'à ce que 50 p. 100 de la dernière dose prise soit éliminé. Le besoin supplémentaire normal a été évalué empiriquement entre 600 à 900 mgr. Au-dessus de 2 gr., on peut parler d'état pathologique. Un organisme normal doit donc être saturé en trois jours, soit trois fois 300 mgr. et doit éliminer par les urines du quatrième jour, 150 mgr. (moitié de la dernière dose). Si le troisième jour, le malade élimine par exemple 100 mgr., son besoin supplémentaire est de 800 mgr.

Un organisme saturé devrait, comme c'est le cas pour le chien, éliminer quatre à cinq heures après absorption la dose reçue. Le temps doit être respecté car au bout de dix heures, le taux peut être redevenu normal. Si l'acide ascorbique n'apparaît pas après le troisième jour, il faut additionner le nombre de jours pendant lesquels la saturation n'est pas atteinte en continuant l'administration et l'on aura ainsi l'insuffisance totale pathologique. On a vu certains cas aller jusqu'à 5.000 mgr. En injections sous forme d'ascorbate de soude, utilisé dans les cas de lésions du tube digestif, l'élimination a lieu déjà au bout d'une heure.

Au cours des maladies infectieuses, les signes d'avitaminose sont considérés comme aggravants. Le degré d'acidité stomacale joue un rôle dans l'assimilation. Les signes d'amélioration sont, à part la disparition du syndrome hémorragique, le retour de l'appétit et du sommeil, diminution de la fatigue, euphorie. Comme dit Demole: "La vitamine C est revivifiante."

Pour Demole, l'homme normal est en état d'hypo-vitaminose. A notre avis, la normale est dans le plus grand nombre. L'homme moderne doit ses vitamines à sa nourriture et en accumule en réserves dans ses oranges, comme il le fait pour les minéraux. La combustion en vitamine C. semble être proportionnée à la dépense nerveuse. Disons plutôt que notre alimentation est trop souvent déficiente en vitamines, que nos nerfs en brûlent d'une façon excessive et que nos réserves se

trouvent être ainsi en insuffisance. Parler d'un déficit physiologique semble donc paradoxal.

La présence de vitamine C, subit des variations au cours de la journée, d'un jour à l'autre et suivant les saisons. Elle dépend, d'une part, de la quantité ingérée, d'autre part de la quantité brûlée.

L'habitude alimentaire s'oppose trop souvent au choix des aliments. Ainsi faut-il tenir compte d'un facteur psychologique (Demole).

L'alimentation irrationnelle est donc à la base de ces avitaminoses frustes qui se déclarent au début du printemps. Ces formes printanières se caractérisent par : lassitude, torpeur, inappétence, fatigabilité et leurs séquelles, catharres, bronchites et infections. On a constaté des avitaminoses pendant la période de jeûne et à la suite d'épidémies de grippe. Ces deux symptômes ont alors été des facteurs de révélation de dystrophie inapparente (Mouriquand). Nous regrettons qu'il n'existe qu'une édition de 1926 du "Précis de diététique" de ce maître, édition qui réclame tant d'adjonctions.

Les organes ont besoin d'un taux normal de vitamine C. La quantité et la qualité des mets sont à considérer dans l'équilibre vitaminique. La surrénale emmagasine plus de vitamine C, que le foie. Elle semble jouer un rôle de régulation puisque, lorsqu'elle est malade, il n'y a plus assimilation de vitamine C.

La méthode de Tillmann n'est pas spécifique pour la vitamine C, mais pour tous les corps réducteurs contenus dans l'urine. Ainsi, chez le chien, d'après Demole, l'acide ascorbique ne représente que le 20 p. 100. La quantité des autres corps réducteurs semble être chez l'homme relativement faible et d'une certaine constance. Le taux réducteur général de l'homme varie entre 3 et 5 mgr. p. 100.

Après ce que nous avons dit des rapports du système capillaire avec les centres nerveux, le rôle traumatique des grincements et crispations des dents chez les nerveux dans la formation des paradentoses inflammatoires et dystrophiques pourrait trouver une explication.

Il y a lieu d'établir ici un rapprochement avec les idées de Heinrich sur les causes psychiques de la paradentose. Il est certain que, du point de vue psychologique, la bouche présente une valeur symbolique particulièrement évidente. Les réactions symboliques à des processus psycho-pathologiques entraînent en même temps des troubles d'assimilation d'ordre végétatif et des troubles nerveux centraux, se manifestant par des grincements et crispations avec leur cortège d'ébranlement et de congestion, de sorte que le paradentium se trouve atteint d'une part par dysassimilation, d'autre part par traumatisme fonctionnel. Ici, à la décharge psychique, peut s'ajouter un traitement par la vitamine C, qui permet de combler l'excès de combustion.

Siebourg signale d'autre part l'amélioration provoquée par le redoxon* chez les nerveux, fatigués, malades mentaux chez qui il a pu dépister fréquemment une hypovitaminose C. Chez ces malades, l'élimination de l'acide ascorbique se fait plus rapidement. On peut donc, dans tous les états inflammatoires de la gencive soupçonner une hypovitaminose qui pourra être décelée par l'analyse chimique. Il sera toujours préférable, avant toute intervention locale, de tenter l'épreuve thérapeutique au redoxon. Nous avons, à l'Institut dentaire de Genève, recouru fréquemment à cet essai et nous avons constaté une amélioration fréquente dans les quinze jours à trois semaines qui suivent sous la forme, non pas d'une disparition de l'hypertrophie, mais tout au moins d'une décongestion et d'une disparition des saignements.

L'action locale de la vitamine C, est nulle. Demole n'a pas pu isoler l'acide ascorbique de la salive, contrairement à Zimmet. Les réactions obtenues par ce

* Vitamine C synthétique préparée par Hoffmann La Roche à Bâle.

dernier sont sans doute dues à la présence d'autres corps réducteurs. L'amélioration que Zimmet et Hans Held signalent sur des cas de gingivite par des bains de bouche avec de la vitamine C, serait due à l'acidification du milieu buccal.

Le professeur Guillermin et A. Held de leur côté ont constaté une grande variation du taux réducteur de la salive chez les normaux et, d'autre part, que les variations entre parodontosiques et normaux n'offrent pas de différences appréciables. Le traitement par la vitamine C est un traitement général (Demole).

Il est certain que le traitement local devra reposer sur un diagnostic général approfondi et à ce propos, j'ai signalé dans un récent travail la valeur de l'intervention chirurgicale dans certains cas de parodontose inflammatoire et les résultats heureux obtenus, soit que la dystrophie osseuse provint d'une parodontite marginale de voisinage, soit qu'elle pût être attribuée à un trouble général.

A l'appui de cette thérapeutique par la vitamine C, je citerai, encore une fois, Hanke, dont l'étude sur 350 enfants, de 10 à 19 ans, pendant trois ans et demie dans un collège américain, est un monument de patience et de précision. Pour Hanke, comme pour Brinch, le scorbut est cause d'une maladie des capillaires. "Toute gingivite, dit-il est le signe d'un trouble du métabolisme." Ces enfants, après avoir été soumis à tous les examens et analyses possibles, reçurent pendant une année le régime standard du collège. Puis pendant une année ce régime fut augmenté, selon les groupes, de 1 à 5 oranges.

Hanke a constaté que 3 oranges contenaient suffisamment de vitamine C pour un individu moyen. Le résultat de ce régime complété avait été une amélioration de la santé générale des enfants. Il y a une diminution de 50 p. 100 des caries. Le régime seul n'est pas apte à les arrêter. Hanke s'oppose à l'origine externe de la carie; pour lui, l'immunité est constitutionnelle. Il est d'avis que l'inflammation gingivale est la cause du tarte et non le contraire. Ces gingivites pourraient être à l'origine d'une parodontose, mais si le régime peut améliorer la gingivite, il pourrait aussi améliorer la parodontose. La dose d'entretien de vitamine C exigerait une orange par jour au minimum, mais la dose curative doit être élevée jusqu'à 5 oranges. Pour Hanke, la gingivite et la carie sont améliorées par la vitamine C, ce qui prouve une fois de plus l'étroit rapport des tissus dentaires et parodontaires. Pendant la puberté, les besoins en vitamine C avaient été plus grands.

Les jus de fruits citriques sont donc les antagonistes de la gingivite s'ils sont donnés en quantité suffisante. Hanke n'a pas constaté de régime déficient en vitamine D. Il y avait des troubles dentaires chez des enfants qui recevaient assez de vitamine D, dans leur régime, mais pas assez de vitamine C. La carie semble donc être due à un phénomène plus complexe. Nous pourrions voir ici l'effet d'une de ces dysharmonies entre les différents métabolismes. On pourrait en citer de nombreux exemples. D'après Cornil, la vitamine A ne peut s'accumuler dans le foie en présence de la vitamine C. La glycosurie est augmentée chez le diabétique par la vitamine A et neutralisée par la vitamine C. La vitamine C serait inefficace dans le scorbut si on y ajoute de l'huile de foie de morue. Enfin l'administration simultanée de vitamines C et D provoquerait le rachitisme. Malgré leur unité fonctionnelle, les vitamines ont une spécificité de groupes. Ainsi A, B, C, D favorisent la croissance de l'os. Si l'une d'elles manque l'action n'a pas lieu. Cela ne signifie pas que toute gingivite doit être traitée indifféremment et uniquement par l'acide ascorbique, mais les propriétés de celui-ci dans le métabolisme général en font un activateur, un catalyseur cellulaire dont l'emploi judicieux peut rendre les plus grands services. Il a donné lieu ces dernières années à différentes applications. Pour lutter contre les symptômes préscorbutiques: acidité, inappétence, nervosité, moindre résistance aux infections, gingivites, on peut prescrire la vitamine C (0, 6 gr. par jour de redoxon, ce qui correspond à 1.800 cc. de jus frais d'oranges, soit vingt-quatre oranges) en combinaison avec une médication opothérapique ou minérale selon les cas.

Lorsque la fonction digestive est affaiblie par hyperacidité ou par des ulcérations, on peut procéder par des injections intraveineuses ou intramusculaires. L'élimination par saturation est plus rapide et plus massive et se fait une à deux heures après l'injection.

Demole a démontré la présence d'acide ascorbique dans les dents normales et sa diminution dans les dents scorbutiques au moyen de la méthode Giroud-Leblond.

Ou utilise le pouvoir réducteur de la vitamine C sur le nitrate d'argent qui se transforme en argent métallique. Au microscope, la vitamine C est localisée par la présence des corpuscules noirs d'argent métallique. Ainsi, on a trouvé de la vitamine C dans le protoplasma cellulaire et dans les glandes à sécrétion interne. Dans la dent, elle est localisée dans le prédentine et entre l'émail et la dentine, en somme dans les tissus en travail.

D'après Serebrenikowa, la composition chimique des dents change dans l'avitaminose C chez le cobaye. Il y a diminution du substratum organique de 0,6 p. 100 et diminution du magnésium dans le substratum inorganique de 0,5 p. 100. Augmentation du radium de 1,7 p. 100. La modification de la quantité de phosphore dépend du Ca et du magnésium.

Les oranges douées d'une haute spécialisation semblent donc être les plus sensibles au manque de vitamine C.

Cependant, la méthode de Giroud-Leblond n'est pas spécifique. Il existe en effet d'autres corps réducteurs tels que le glutathion (tripeptide, composé soufré) et la cystéine. Les albumines, par exemple, donnent naissance à des corps réducteurs. On a trouvé chez des cobayes scorbutiques la ligne noire d'argent métallique. La vitamine C n'est donc qu'une partie d'un système oxydo-réducteur qui permet aux tissus de respirer. Elle est un des régulateurs indispensables de la croissance des os et de la formation des dents.

Au cours de toutes les maladies infectieuses, pneumonie, tuberculose, typhus, staphylococcie et colibacillurie, le taux de l'acide ascorbique diminue dans les urines, La présence de vitamine C favoriserait la naissance des anticorps.

Au cours de la grossesse, les besoins de la vitamine C augmentent sensiblement; l'ovaire et le placenta en contiennent une certaine quantité. Le lait de femme est cinq à six fois plus riche en vitamine C que le lait de vache. Chez la femme gravide, l'hypovitaminose se manifeste par la fréquence des gingivites et des caries. D'après Breuer, la prophylaxie des déficiences minérales et vitaminiques doit se faire dès le deuxième mois, car une faiblesse des os entraîne une anomalie de croissance du squelette et particulièrement des mâchoires et dans la position des dents.

En résumé, l'acide ascorbique augmente le tonus circulatoire et le tonus du vague; il entraîne une baisse de la température, raccourcit le temps de coagulation, donc lutte contre l'hémophilie, il stimule le péristaltisme; il est diurétique, augmente la réserve alcaline, il neutralise la thyroxine, abaisse la teneur du sang en iode et peut, par conséquent, être utilisé en cas de Basedow. Il augmente le métabolisme jusqu'à 40 p. 100, il y a donc une activation de la combustion. Il favorise l'hématopoïèse; il maintient en somme l'équilibre du pH cellulaire.

Il existe un état d'hypervitaminose qui paraît, pour le moment, sans danger et qui se manifeste chez le nourrisson d'après Widenbauer, par un état vago-tonique avec érythème, urticaire, péristaltisme exagéré, œdème (Sivadjan). Chez les adultes, cet état entraîne une augmentation de la réserve alcaline, hypoglycémie, diminution du tonus circulatoire et du tonus du vague et augmentation du temps de coagulation, et favorise l'artériosclérose. Dans les hypervitaminoses, on se trouve donc devant un effet paradoxal.

Il nous faudrait, pour terminer, tirer la conclusion qui vient à l'esprit, c'est l'importance qu'il faut attacher à la diététique. Il est nécessaire de sauvegarder l'équilibre

complexe de ces différents catalyseurs, qu'ils soient endocrines ou exocrines, dont l'importance sur la vie cellulaire n'est plus à démontrer. L'hyperacidité gastrique est une cause d'avitaminose (Fuchs). Mais un estomac en état d'hypoacidité détruit aussi la vitamine C. Dans un régime végétarien, la tendance du milieu est toujours alcaline (Bircher) et nous voyons un régime riche en éléments minéraux et vitaminiques entraîner une hypovitaminose C. En outre, en milieu alcalin, les sels calciques sont moins solubles, il y a augmentation de phosphore et diminution d'absorption de calcium. Steppe a constaté que la vitamine C renforce l'effet de l'insuline et fait baisser la glycémie. C'est l'excès de glucose diabétique dans le sang qui entraîne une hypocalcémie.

Page a montré les désastres que provoque l'abus du sucre, sous la forme de décalcification osseuse et dentaire. Ainsi, nous nous trouvons toujours en présence de pluridéficiences entraînant, selon l'expression de Mouriquand, une diéto-toxicité. Le rôle du médecin-dentiste peut donc être essentiellement prophylactique.

Le régime végétarien devrait être considéré comme un moyen de traitement. La valeur d'un régime repose sur la variété et sur la simplicité de préparation des aliments. Une nourriture saine devrait éviter l'abus de conserves et d'aliments à valeur nutritive. Il faut réaliser un véritable équilibre alimentaire dont tout notre être se ressentira.

L'hypovitaminose C. serait saisonnière, en rapport avec la diminution des légumes et fruits frais en hiver, ou la diminution de leur réserve en vitamines. Ceci expliquerait les irrégularités dans la formation de la dentine, que plusieurs auteurs ont constatées.

Pour terminer, voici le vœu qu'à formulé Brinch au VI^e Congrès de l'Arpa Internationale, à Copenhague. Il propose la recherche symptomatique de l'hypovitaminose C. pour l'étiologie des gingivites chroniques ou récidivantes. Cette recherche prouverait: 1° l'insuffisance de la vitamine C de la nourriture normale; 2° le déficit de la vitamine C, dans la composition de l'alimentation populaire et enfin, s'il y a hypovitaminose, ces recherches rendraient possible la prophylaxie de certains cas de parodontose. Pour diagnostiquer le scorbut, plusieurs méthodes ont été proposées. Pour Brinch, le diagnostic le plus sûr se ferait par titrage de l'acide ascorbique dans le sang ou le liquide de la moëlle épinière, par la méthode de Lund et Lieck de Copenhague. Mais cette méthode colorimétrique est délicate. La méthode de Tillmann, plus grossière, est cependant plus expéditive et fournit des tests suffisants.

Il propose en outre une anamnèse alimentaire (Kost anamnèse), chaque pays ayant dans une certaine mesure son genre d'alimentation. Il faudrait relever dans chaque pays un grand nombre de menus quotidiens et l'accompagner d'un examen clinique général du patient. Au Danemark, par exemple, on examine toutes les gingivites en recherchant les facteurs locaux irritants, la réaction de la gingivite au traitement local, puis on examine les gens vivant à la même table, par exemple, dans les casernes, les asiles, les pensionnats, pour voir leurs réactions individuelles à la nourriture. On examine aussi les femmes enceintes, on cherche le pourcentage des gingivites gravides. La quantité de vitamine C, ingérée variant avec les saisons, les recherches devraient comprendre une longue période et permettre de définir dans quelle saison ces états préscurbutiques sont les plus fréquents.

Gingivo-Arthritites Dentaires et Avitaminoses

par M. DECHAUME

La question des vitamines a été surtout envisagée dans ses rapports avec les dents. On connaît cependant:

—Le *scorbut*, produit par l'avitaminose C et caractérisé par une hypertrophie

gingivale, des hémorragies, puis des ulcérations.

—La *stomatite pellagreuse*.

D'autre part, on a voulu accorder à la vitamine A un rôle antiinfectieux et elle a été préconisée en application locale pour aider à la régénérescence des épithéliums altérés ou détruits quelle que soit la cause qui ait déterminé la lésion locale.

Enfin, tout récemment, un auteur anglais, Wilkinson a incriminé l'avitaminose A, à l'origine des lésions des tissus d'attache dentaire (images observées analogues à celles observées par Mellanby chez des chiens alimentés avec un régime déficient en vitamines A).

Mais il semble bien qu'à côté de ces lésions évidentes, il existe des états voisins des carences eutrophiques (Mouriquand), peut-être plus nombreux qu'on ne le croit. Ainsi, Sézary et de Font-Réaux ont présenté à la Société de Dermatologie et de Syphiligraphie de Paris du 14 janvier 1937 (*Bulletin*, p. 64), une stomatite par carence en vitamines C et peut-être en vitamine B. Nous venons également d'observer un certain nombre de patients atteints de gingivite hypertrophique avec ou sans gingivo-arthrite et chute des dents (pyorrhée), chez lesquels l'origine avitaminosique paraît démontrée par l'interrogatoire et les résultats thérapeutiques.

1.—M. D. . . . , 25 ans, vient nous consulter le 19 mars 1936, pour une pyorrhée grave qui évolue depuis quatre ans et a déterminé la chute des incisives, canines et prémolaires inférieures. Ce jeune homme qui a toujours joui d'une excellente santé a fait deux ans de service militaire dans le Sud Tunisien. Durant ce séjour il a été soumis à un régime particulièrement pauvre en vitamines (semoule de blé, riz, dattes, figues sèches, conserves . . . jamais de légumes verts, oranges ou citrons).

Il n'a eu ni paludisme, ni dysenterie, ni syphilis. A son départ du régiment il a fait l'objet d'une visite médicale qui n'a rien révélé; les réactions sérologiques se sont montrées négatives.

Il est rentré en France en août 1931. Depuis cette date, il a continué un régime déficient en vitamines (peu de légumes verts, pas de fruits . . .) et riche en épices.

En 1932, l'état des gencives s'est aggravé: elles se sont rétractées au niveau des incisives inférieures, sont devenues rouges et se sont mises à saigner au contact de la brosse.

En 1933, les dents ont commencé à tomber (le patient en faisait lui-même l'extraction).

Il a consulté de nombreux dentistes qui tous ont déclaré qu'il suffisait d'attendre puis qu'ultérieurement on établirait une prothèse.

Lorsque nous le voyons pour la première fois, le 19 mai 1936:

Au maxillaire inférieur subsistent seulement g^8 , g^7 , g^5 , d^3 (très mobile) d^7 , d^8 . Le rebord alvéolaire est fortement résorbé.

Au maxillaire supérieur les gencives sont congestionnées et rétractées dans la région incisive, surtout du côté gauche, et jusque vers les prémolaires. Les incisives sont mobiles. Les gencives saignent au moindre contact. Les dents sont sensibles au sucre.

Pensant à une "pyorrhée" par avitaminose, après avoir fait l'extraction de d^3 , nous prescrivons un traitement avec de l'acide ascorbique, et des cautérisations gingivales.

Le malade revient seulement le 19 avril, n'ayant fait que son traitement général (changement de régime, acide ascorbique). L'état des gencives s'est complètement transformé: elles sont à peu près normales.

Depuis la guérison se maintient.

2.—Le M. . . . , Pierre, 13 ans, nous est amené le 23 avril 1936 pour une hypertrophie des gencives très marquée au maxillaire supérieur (fig. 1).

L'affection aurait débuté il y a environ trois ans et évolué progressivement.

Dans l'interrogatoire, la seule chose à retenir c'est que l'enfant est en pension

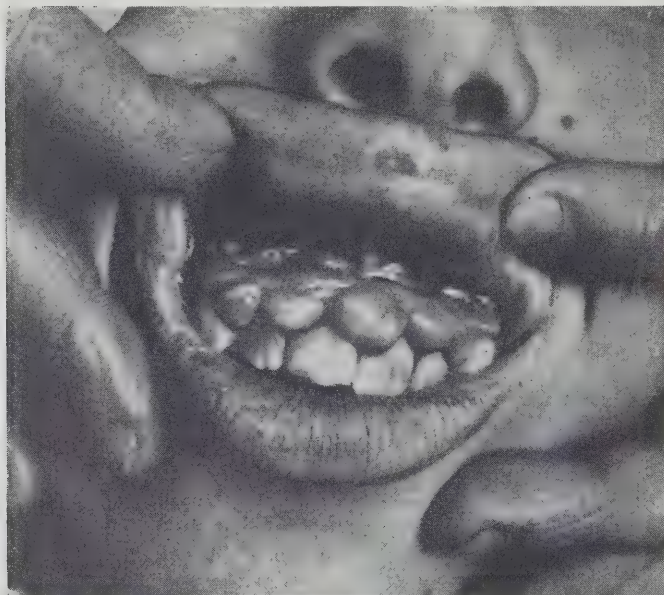


Fig. 1

depuis plusieurs années. Les menus paraissent assez peu variés et particulièrement pauvres en légumes verts et fruits. Dans ces conditions, il y a lieu d'envisager la possibilité d'une avitaminose.

Nous adressons l'enfant au Dr Giroud pour tâcher de confirmer le diagnostic d'avitaminose.

Il nous répond:

Le dosage de l'urine au Tillmann donne 20 gr. par litre, au Bezssonoff, 17 mm 6. Ces chiffres sont assez élevés.

L'examen de sang donne:

Globules rouges	3.650.000
— blancs	4.400

Le signe du lacet est légèrement positif.

Temps de saignement	2 minutes 5
— coagulation	6 minutes

On institue malgré tout un traitement avec l'acide ascorbique, 4 comprimés par jour (soit 200 mgr.).

Le 16 mai, nous revoyons l'enfant. Il a suivi son traitement à l'acide ascorbique pendant vingt jours et mangé des fruits. L'état des gencives est très amélioré. On excise les bourgeons qui subsistent et on les envoie à l'examen histologique.

En février 1937, la guérison se maintenait. L'examen histologique pratiqué par Mlle Dobkevitch dans le laboratoire du Dr Civatte nous a donné les renseignements suivants:

Epulis du type inflammatoire. Présence dans la sous-muqueuse d'un infiltrat plasmocytaire dissocié par des bandes de sclérose.

A noter l'existence à la face profonde de la muqueuse qui est végétante de petites perles feuilletées parakératosiques. (*à suivre*)





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In War Time

by F. N. DOUBLEDAY, Guy's Hospital, London, England

THE Editor has invited me to write something of war time experiences. I will relate the fortunes of the Dental School first and then tell my personal reactions to the onslaught of war. Guy's Hospital was founded in 1722 by Thomas Guy, a bookseller, who made money largely by a privilege which was granted to him, by the University of Oxford, to sell Bibles. The money, so obtained, he invested prudently in one of the first great financial transactions, "The South Sea Company." Before mad and senseless speculation brought the concern to ruin Guy sold out, and invested his money in real estate, mainly in the counties of Hereford and Essex, property which the Governors of the Hospital still hold. From the first the hospital had a famous Medical School. Towards the end of the century a dental surgeon, Joseph Fox, was added to the staff. In 1799, at the request of the staff and students, he delivered the first of a series of lectures on Dental Surgery, which has continued, without interruption, until the present time, thus constituting the school as the oldest centre of organized dental teaching in the world.

At the outbreak of the war the hospital taught more than a thousand students, of whom about six hundred were medicals and four hundred dentals. The Dental School had already planned to move its students into the country, if war came. In pursuance of this scheme it joined with the Medical School in occupying

five large houses near Tunbridge Wells in Sussex. The Ministry of Health had arranged that Guy's should take over a series of hospitals stretching about thirty miles along the south side of the Thames (a hot area in war time) and so the two schemes worked in well together. For the first year of the war all the dental students were in this centre but since then all senior students have been brought back to Guy's itself for their clinical work and only the junior years continue in the country. The plan has succeeded well, the number of students and the percentage of examination passes have been maintained and the services continuously supplied with a stream of dental officers. In the country the students study chemistry, physics, zoology and botany, in specially organized laboratories for the first year, then for two years they study dental mechanics, together with general anatomy and physiology and the special anatomy of the teeth and jaws; the course there finishes with a three months phantom head class preparatory to clinical work. At Guy's Hospital the supply of patients has been fair, but there are not as many patients as come in peace time. Then we usually see about three thousand dental out-patients each week; this number is halved now when every one is so busy trying to do three people's work.

LONDON AFTER DARK

The personal reaction to war will interest many. A vivid recollection of the

last war was the sense of impending evil which resulted from coming out of the hospital one evening in 1915 and suddenly realizing that the street was darkened. In this war the alternate bands of white paint on curb stones and lamp-posts gave the first sense of the imminence of war. But whereas in the last war the lights were only dim, in this one the blackout is absolute and is always present after dark. It soon becomes a habit. We screen the shades of our lamps with dark paper and in addition to the shutters or curtains of our windows we use dense black cloth, extending well beyond the margins of the frame. The obliteration of light is effective.

At first there was no street lighting at all; many people made use of torches but I find intermittent flashes only intensify the darkness afterwards, so I depend on, and improve the use of my eyes. On a moonless night, one soon becomes accustomed to feeling with the foot where the edge of the pavement is, so that you do not step off too abruptly. I always carry a white handkerchief hanging from my hand so that others may see me in spite of my dark clothes. Quite a number of people have had serious facial injuries as a result of walking into lamp-posts and similar objects. Motoring at night is dangerous but often has to be done. We are allowed a modified "Anderson" head lamp but it is very difficult. When enemy planes come overhead sirens give a loud intermittent moaning sound, which the people call "moaning Minnie;" when the planes have passed the sirens give a continuous wail.

AIR-RAIDS

Recently daily air-raids have been less frequent and severe but last summer and autumn we had many. Often the planes are plainly visible, wheeling and circling overhead, an object of great interest to some people in the street and apparently

of complete indifference to others. I think the majority continue to walk or look into shops as though nothing were happening. Personally I go on my way if I am on duty but I do not care to wander in the streets during air-raids when there is no essential reason for doing so. Here are some of my experiences of daylight raids. I was standing near my house one day when a German plane was caught in a ring of bursting shells. A policeman who was watching the spectacle with me, was an ex-gunner of the last war and was moved to wrath by the efforts of his successors. I think he was unjust, the enemy plane was at a great height and its swoops, dives and abrupt turns must have made it a difficult target. As far as we could tell it got away.

On another occasion in my car, where it is much more difficult to hear, things seemed to be getting unpleasantly noisy so that I turned off into a side street, thinking a narrower way would help me to avoid the steel fragments which were falling. Scarcely had I rounded a large concrete building than two huge bombs hurtled across, seeming to lift all the air out of the street before they burst fifty yards away. The coolness of the people of London is amazing. Amid scenes of recent destruction you see people cleaning their doorsteps and polishing the brass knockers and door bells as though a ruined house next door meant nothing at all.

It is tragic sometimes to watch a rescue party, steelhelmeted and grimy, digging away in a pile of ruins to rescue people buried beneath them, while the neighbours, who have had such close escapes, stand in groups, watching silently and quietly all that is going on. One morning as I drove to my hospital the main road was blocked by an unexploded bomb. Turning into a side street I was held up for a time by the smouldering wreckage of houses still burning on either side of

the narrow street. A poor man, about fifty years of age, noticing the label on my wind-screen, came to the open window, and in a hoarse voice said, "Guv'nor, is it true that the 'orspital is 'it?" I replied, "Yes, but not seriously." "Thank Gawd for that," he said, "it may be my turn tonight and I likes to know where to go." This was said seriously and without emotion. With the smouldering ruins of his neighbours' houses around him, he was contemplating his possible fate, only wanting to be sure that the hospital, which had probably helped him into the world, would be still there to assist him out of it, if need arose.

As one drives to hospital in the early morning it is a wonderful thing to see the firemen, who have just been relieved by the day shift, driving back. With smoke begrimed faces, their clothes scorched and burnt, often with a head or hand bandaged, they hang on to the rail of the engine, whistling, exchanging repartee with the passers by as Londoners do; it is difficult to realize that they have worked in deadly peril all night. Now they are going home for a bath and breakfast and for the time the dangers are over. Until the outbreak of war these men were ordinary civilians following peaceful trades; they evidently had the stuff of which heroes are made, within them.

During the raids last September an Auxiliary Fireman came into the casualty surgery at Guy's, with his eye full of splashes of oil. He, with two other men, had been standing with oil and water above their knees, maintaining their footing by hanging on to the hosepipe which they were working. While doing this, succeeding waves of enemy planes bombed them again and again. It would have been just for this fireman to have gone back sick to his fire station but when his eyes had been washed out and he had rested a bit he got up and said he was

going back to join his mates. Although he could not see properly he quietly walked out to help in fighting the blazing inferno down at the docks.

WOMEN IN WAR TIME

Nor are the women less brave than the men. My secretary, a girl of 22, lives in a part of central London which has been heavily bombed. During these same raids her father, a volunteer policeman at the London Docks, was severely injured and had to be evacuated to the country. During all the months since, the secretary and her mother have slept alone in a dug-out, often with bombs falling near and with every window blown out of their house. During the whole of this dark and hard winter, this girl and another, who are my principal helpers, have never once missed work or failed to arrive at 8 a.m. or have they been anything but cheerful and steady in all their work. One morning there was a patient in my clinic at Guy's, a poor shop girl, looking pale and tired from want of sleep. She asked for a tonic, explaining, "We must keep our backs straight now." These are the ordinary men and women who have made England. It is good to live among them at such a time.

BOMBING

Bombing also has its humorous side. Many people make ingenious use of their disasters. A shoemaker, after having the upper part of his house destroyed, cleared the ground floor and carried on his business as before. On the ruins he fixed a notice "Flats to let upstairs, ventilation excellent." A flowershop was utterly destroyed, next morning the girl and her flowers were on boards upon one of which was this notice, "Shop destroyed by that scab Hitler but the flowers are as fresh as ever." A newsboy had sold his papers from a barrow in front of a greengrocers. As soon as the smouldering ruins of this shop were cool he came back and displayed his papers on the wreckage putting

up this notice, "Please continue to support me in my new premises."

I always sleep in my own house, if my turn has come I would rather remain in comfort to the last moment, but for some people the herd instinct of a public shelter is attractive. On a dark winter's morning one can always tell the approach of day break by the sound of those people hurrying home in the darkness in search of warmth and food. In the shelters, in tubes, and beneath large concrete buildings berths are ranged three tiers high. Many people eat their suppers, spend the evening and sleep in them every night.

When the September blitz began I continued to sleep at the top of my house but soon found that the noise and the sense of insecurity made sleep difficult, so for the last six months I have slept upon a mattress in the basement of the building. Here one goes to bed by putting on a different lot of outdoor clothes. On bad nights it is essential to sleep with boots on as well; you soon get used to this and sleep quite peacefully. The advantage is that if showers of incendiary bombs come down it is a matter of seconds to run up to deal with them.

When bombs of any sort fall close all the householders turn out into the street to give any help that is required. A lot of shell casing has pierced my roof and on one occasion part of a barrage balloon came down upon my own and some neighbouring houses. So far incendiaries have been kind. Twice two have fallen together outside my front door but we all keep buckets of sand and earth handy and with a little resolution they can be covered. One of these bombs was stamped out with his feet by a man who happened to be passing but he was severely burnt and temporarily blinded by the flames which enveloped him. He was a fire-watcher about sixty years of age, who was not due to come on duty for some hours but hearing the incendiaries he

came out into the street, ready to help if required. On some occasions large fires have been started and the appearance is very terrible, great banks of fire going up into the sky. You have the awful feeling that people are trapped there and also that the flames may guide German bombers to give you another turn at any moment. Sometimes the roar of the gunfire and the crash of the bombs goes on all night. They cause an intense noise like a great thunderstorm reverberating among high hills, with the flash of bursting shells and bombs for lightning.

AT HOME

My house was built two hundred years ago when Queen Anne reigned over England and Cartier and Frontenac ruled in the French Canadas. Its cross beams are solid tree trunks of oak. Even so it shakes and moves when high explosive bombs fall near. On one occasion, when three large houses in the next street were destroyed at a blow, the clouds of dust and fumes were so intense that breathing was difficult until my gas mask was put on, this made breathing slow but quite easy.

On this occasion the firemen were walking up the street four abreast holding hands with their arms widely extended; they could not see or tell where the bomb was. As a rule when a bomb falls policemen and firemen literally run at their best speed to the spot. They seem to have no thought of danger, their only concern is to render assistance to those beneath the building and to get the fires out as quickly as possible. Delayed action bombs are very troublesome.

One morning, when I was presiding examiner at the Royal College of Surgeons, the candidates were warned that there was a 500 kilo bomb in the neighbourhood which was likely to go off during the morning. After half an hour it did so; the students greeted it with a loud cheer but I could not detect that the

somewhat disconcerting interruption had any other effect upon them. On another occasion I was watching my bath filling before breakfast when a delayed action bomb exploded, blowing up a house which had been evacuated during the night. Dirt and debris poured in through the window so that no bath was possible then.

One morning my house-surgeon and I walked to the tidal edge of the Thames to look at some damage across the river. Some police in a boat were pulling on a rope when suddenly up came the end with the body of a man attached. The poor fellow's arm, rigid in death, was stretched up as though he had tried to grip the quayside in his last moments. The crowd peering over the granite bridge, sixty feet above, tried to see what was in the river but the police instantly pushing the body under again, hitched the rope to a mooring post and went off in their boat, no doubt returning to remove the body after dark when the inquisitive crowd had gone.

CANADA AND THE U.S.A.

On five occasions it has been my good fortune to travel throughout the length and breadth of Canada and of the United States. I know well how loyal you Canadians are to the Mother Country; I have often experienced the friendship and ready sympathy of the citizens of the United States. We are all people with the same outlook on life. But you in North America must realize that even when victory comes, as it will come to us,

that we in England are finished. It has been our privilege to stand in the wall for freedom. The best of two generations of our people have given their lives. The wealth and resources of England have been poured out that the peoples of Europe and of the world may have liberty. It was our lot to stand in the front and centre of this battle but financially we are finished and our opportunities are done. There is no reason to regret it; we have stood for all that is best in human thought and life and now we hand these traditions on to you in North America. One of your Canadian doctors, who gave his life in the last war, has put this into words which will live as long as the English language.

IN FLANDERS FIELDS

In Flanders fields the poppies blow
Between the crosses, row on row,
That mark our place, and in the sky
The larks still bravely singing, fly
Scarce heard amid the guns below.

We are the Dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved, and were loved, and now we lie
In Flanders fields.

Take up our quarrel with the foe:
To you from failing hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die,
We shall not sleep, though poppies grow
In Flanders fields.

JOHN McCRAE, obit, Dec. 1917.
April 29, 1941.

EDITOR'S NOTE:—*Since the above article was received Dr. Doubleday has written that a high explosive bomb has hit his own house. He states that he was lucky in that the bomb exploded on impact with the chimney, blowing the chimney and roof of his home as well as those of his neighbours to bits. All windows, fireplaces and many of the doors were blown out by the blast, the mess and dust being beyond belief. Dr. Doubleday states that as his surgery is on the first floor and as he sleeps on a mattress in the basement he was soon able to get the working parts of the house in order and so manage to live and practice quite well.*

Facing Tomorrow

IF YOUR experience is anything like mine, you will find that the average of motorists who respond to the lowering of headlights is not as high as you would anticipate. The non-response of a small percentage is excusable for some may think their lights are already lowered and with others it may simply be oversight. It is conclusive though that with many it is deliberately not done. Why should the individual not respond? Experiment with fifty or one hundred motorists.

Furthermore it is a known fact that many refuse to take any part in co-operative efforts even when it is to their own advantage to do so. We are agreed that the modern car lights when lowered are better for both drivers in passing and in addition an improved view of the side of the road is gained.

Is this not the answer or reason why our organizations, no matter how altruistic, so often find difficulty in accomplishing their purposes. Dentists are engaged in fine detail. They, for the most part, operate singly and adopt a regular routine, all of which causes them to resent any interferences which may interrupt their procedures. Many become methodical, following definite sign posts, which they have learned to recognize. They distrust any new markings which appear along their pathway of life. Hence many

members of our profession are not co-operative.

We pride ourselves upon belonging to a profession and point out the landmarks of professional status comparing them to the inferior commercial standards. The initial mark of any true profession must be co-operation for a profession signifies a body of individuals banded together for the advancement of that particular calling. You just cannot be a member of a profession and carry on singly. You must co-operate or lose status.

No group of men need the advantages of mutual help more, nor is there any one who has more to gain by co-operation. One dentist cannot visit the office of another without gaining some new idea, nor can they spend an hour together without each being the richer. The same condition holds true for large groups and for the small community where but two or three represent the dental profession.

Some men foolishly let weeks go by without contact with their professional fellows. Gradually this sort of thing leads to misunderstandings, whereas through constant association every man becomes the better. Drop over tomorrow and call on your confrère, better still, make more than one call. It will be the hour you will remember next week.

NEDREW TELLUG.

EASTERN ONTARIO DENTAL ASSOCIATION CONVENTION

The Sixty-fourth Annual Convention of the Eastern Ontario Dental Association will be held on October 27—28, 1941, at the Chateau Laurier Ottawa.

The main features of the program will include:

Prosthetics Dr. Felix French.

Practice Management Dr. G. V. Morton, Dr. Jack Bothwell, and Dr. Charles McLean.

The Mobile Clinic of the Canadian Dental Corps

by FRANK LOTT, Colonel, C.D.C.

ONE of the dominant characteristics of the present war is movement. Each unit of the armed forces must be able to move rapidly, for long distances, and on short notice. The original ideal of the Canadian Dental Corps was to bring dental treatment to the troops close to the line. But, it was not long after the outbreak of war until it began to be apparent that there might be no line and that continual movement might be necessary.

Consequently, the original C.D.C. ideal had to be modified. If the troops might be constantly moving, the C.D.C. must be prepared to move with them. And so, by the summer of 1940, from trucks that would carry the dental personnel and their kits to new quarters, the conception

changed to mobile clinics that would not only move the operators, technicians, assistants and orderlies to new fields, but would themselves serve as clinics, laboratories or x-ray darkrooms upon occasion when those fields were reached.

The first move was to get the acceptance of the new plan by National Defence Headquarters. After a due presentation of the situation, the principle was approved and authority granted for the construction of a pilot model.

Then began the study to determine the possibilities of a mobile clinic. An investigation was made as to the relative merits of trailers and trucks for this purpose. After consideration of the experience of known types of travelling dental





And now let us have a look at this pilot model of the C.D.C. mobile dental clinic.

The chassis is a standard army type with four-wheel drive and a winch operable from either end to pull it out of any predicament so serious that the four-wheel drive cannot manage it.

Note the locker below the body on each side. One of these contains a set of tools for the use of its Royal Canadian Army Service Corps driver; the other contains a 2,500 watt gasoline-driven generator. This generator is a 110-volt, 60-cycle type, so

clinics and having in mind the demands of war, the truck was unhesitatingly favored.

After this decision, a reconciliation was sought between the Army demands of low centre of gravity and minimum body height and space and the dental demands of height and space sufficient to prevent undue discomfort, fatigue or inefficiency. Among the many other problems which had to be solved were the obvious ones of water, light, heat, ventilation, electric power and thermal insulation. At this stage, experts of the Royal Canadian Ordnance Corps were called in and their enthusiastic co-operation and experience in vehicle designing soon solved all these problems in turn,

that standard Canadian dental equipment can be used regardless of the characteristics of the electrical supply of the country or district in which the clinic is operating. The output is sufficient to activate the operating light, operating motor, sterilizer, etc., for the operator. If the truck is being used as an x-ray laboratory, it is sufficient to activate the x-ray machine. Finally, if the truck is being used as a prosthetic laboratory, the output is sufficient to run polishing motors, etc. This generator is intended to be lifted out of the locker and operated on the ground to prevent the possibility of unpleasant vibration for the dental operator. It can, however, on emergency, be run in its locker. There is included

The Mobile Clinic of the Canadian Dental Corps

with it a 50-foot length of cable to permit its use should the clinic be temporarily located in some structure other than the truck.

At each side of the front of the clinic above the cab on the outside is a water tank. The capacity of the two is about 25 gallons of filtered, sterilized water. They are connected to a common faucet inside and below their level to permit of a gravity flow. Later models will have these tanks a little below their present level and inside the vehicle to prevent freezing in cold weather and to reduce trouble in connection with cleaning and filling them.

At the back of the truck are the portable steps. When the truck is under way, these are carried immediately beneath the body between the sills.

The body is of light steel construction. Inside, it is insulated with cork and masonite. The floor is insulated with rubber and finished with deep-red linoleum. Interior decorating is a combination of light green and cream.

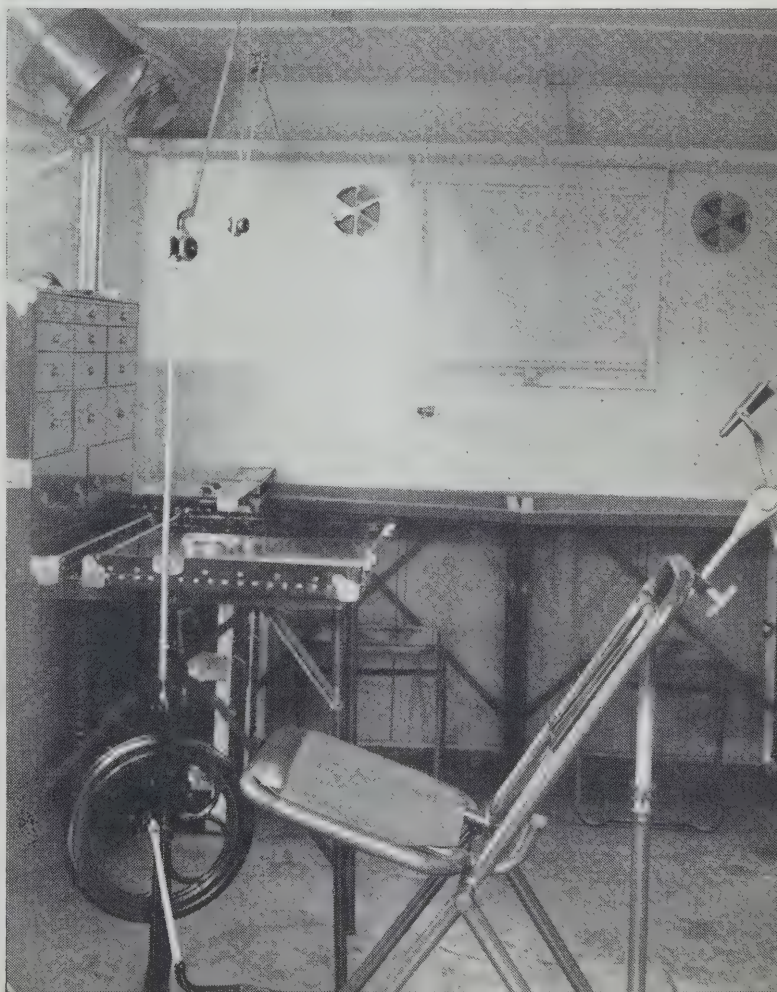
Inside dimensions are twelve feet in length, seven and one-half feet in width and somewhat over six feet in height.

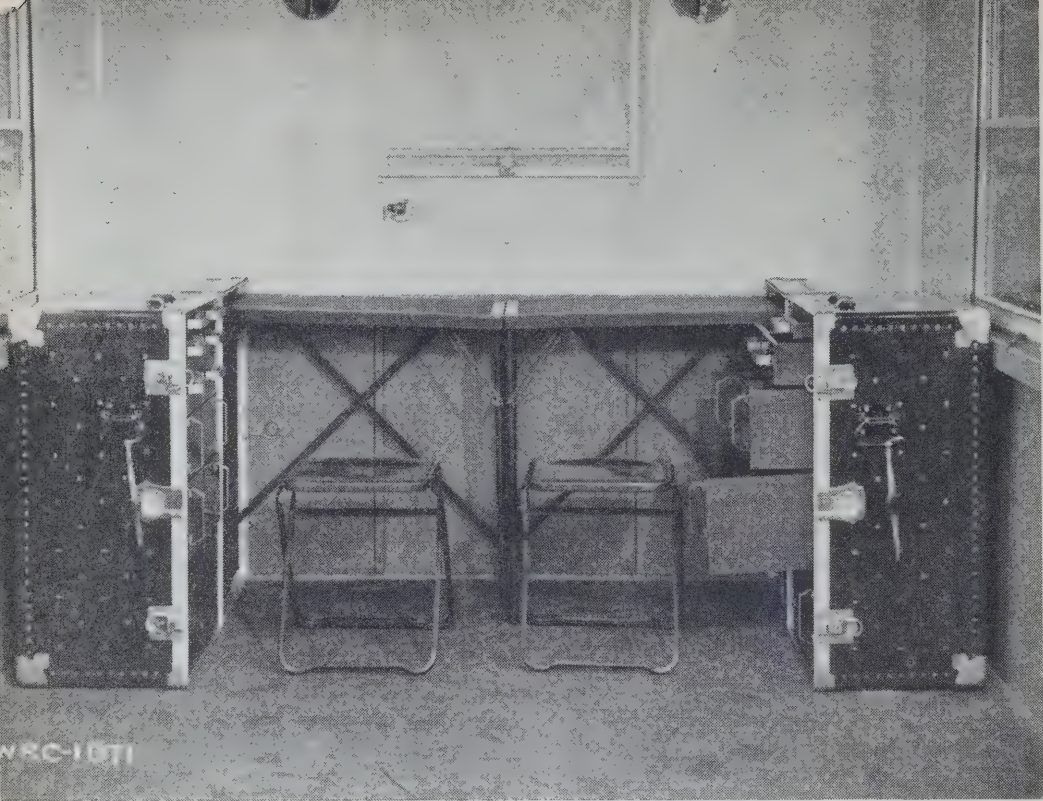
The body is heated by a gasoline unit with a fan for circulation purposes. The same fan is used for ventilation pur-

poses during warm weather.

The doors are placed at the back to make the entire wall space available. There are two windows, each three feet square, symmetrically placed on each side. They are of latest coach-type design with armour-plate glass set in rubber moulding. Other windows are placed in the front above the cab and in the doors. This arrangement gives very good natural lighting regardless of the position of the dental chair. All windows are provided with adequate blackout shades.

Artificial light is supplied by two sources. A large light is placed a little to the left of the centre of each window for operating purposes regardless of the position of the chair. It is a 100-watt unit connected to the motor-generator





circuit. Six small coach lights for general illumination when the vehicle is in motion are connected to the truck battery.

The only other interior fitting is a luggage rack across the front end for the personal kits of the detachment. The dental kits are regarded as self-sufficient for treatment purposes and there are no built-in shelves, brackets or seats of any kind.

The clinic, as photographed, is arranged for a single operator and a single technician. It can be arranged for two operators without technicians or for four technicians. In addition, there is provision, not shown on the photograph, for the attachment of the standard army x-ray machine. With this arrangement, the operator can both take the radiograms and

develop them right in the clinic since the closing of the blackout blinds gives him a light-proof darkroom. It is, therefore, to be regarded as more or less of an all-purpose Dental Corps vehicle.

This unit has been referred to as a "mobile" dental clinic. In justification of this term, it should be noted that all equipment can be packed and the clinic be under way in less than five minutes.

The generosity of friends of the Corps in providing these clinics has been greatly appreciated. Although they have been authorized but a short time, several have already been donated by various dental groups, welfare organizations and private individuals.

July 25, 1941.

Save Our Way to Victory—Buy War Savings Certificates *Regularly!*

The School Dental Service in New Zealand

A New Dominion Training Centre for School Dental Nurses

by J. LL. SAUNDERS, D.S.O., B.D.S. (N.Z.)

Director, Dental Division, Department of Health, New Zealand

IT WAS only comparatively recently that I was privileged to give to my colleagues in Canada, in response to an invitation from the Editor, an account of the school dental nurse system that is in operation in New Zealand (*Journal of the Canadian Dental Association*, Vol. 3, No. 11, Nov. 1937).

In responding now to a request for a description of the new Training School that has been erected for the training of school dental nurses, there is no need to cover the same ground again. A very brief outline of the Service as a whole will suffice to provide a background against which the new Training School can be visualized in its proper perspective in relation to the School Dental Service of which it is a unit.

The distinctive feature of the New Zealand School Dental Service is that its main personnel consists not of dental surgeons, but of specially trained school dental nurses. The Service in its present form was established in 1921—twenty years ago, and has long since been recognized by the profession and the public alike as an integral part of the dental organization of the Dominion.

Administered and controlled from Wellington, the Capital City of New Zealand, the School Dental Service now reaches most of the Primary Schools in the Dominion. From the time that the first draft of thirty-five young women commenced their two years' training in 1921, the Service has been steadily developed, until today the professional personnel number 514, of whom 20 are dental surgeons, 3 are trained nurses, 11

are dental nurse-inspectors and dental nurse-instructors, 331 are school dental nurses stationed in field clinics throughout the country, and 149 are student dental nurses undergoing training.

Some 110,000 school children are now receiving regular and systematic dental attention at six-monthly intervals. There are 351 treatment centres, and these serve the pupils of approximately 1,900 schools. Each dental nurse is allotted sufficient schools to give her a group, when fully developed, of 500 patients.

In order to carry out the full program of the Government, which is to provide dental attention for the whole of the Primary School pupils of the Dominion, as well as for children of pre-school age, it is estimated that a field staff of 500 school dental nurses will be required. It is expected that this will be achieved within the next few years.

To build up and maintain this number (the normal annual wastage is under ten per cent), there is in Wellington the Dominion Training School for State Dental Nurses. Here the young women who aspire to become school dental nurses undergo their two years' intensive training, after which they are sent to school dental clinics in all parts of the Dominion.

Last year, the Training School was transferred from its former premises to a new modern building, especially designed and equipped for the purpose. The new Training School was officially opened by Her Excellency, Viscountess Galway, wife of the Governor-General, in the presence of the Prime Minister and



The Dominion Training School for Dental Nurses

other Ministers of the Crown, and of representative citizens. It is interesting to note that the main theme of most of the speeches at this ceremony was the importance of the preventive and educational aspect of the work of the School Dental Service. The Prime Minister, in the course of his speech, referred to the dental nurses as missionaries going out into the schools to teach the children the gospel of prevention of dental disease.

The new building, which cost over £80,000 has been described as being architecturally impressive. The ground floor is devoted mainly to administrative activities, the first floor to teaching and the second and mezzanine floors to treatment.

The main clinic is a room of imposing proportions. It is 156 ft. long, 23 ft. wide and 21 ft. high. Spacious windows occupy the whole of the front and the interior is painted in a pleasing shade of pale green with a dull finish, giving a soft clear light for operating. This clinic contains 49 chairs, arranged in three rows. The chairs themselves are of a simple clinic type. On the right of each chair is a pedestal cabinet for instruments, and on the left a dental unit

carrying an electric dental engine, bracket table, spotlight, etc. Extraction rooms and recovery rooms are housed on another part of this floor, as well as an orthodontic clinic containing five chairs.

On the mezzanine floor there is an auxiliary clinic with 12 chairs, an x-ray room and a laboratory where saliva tests and other procedures can be carried out.

On the teaching floor there are lecture rooms, demonstration room, preliminary operative room, library, instructors' studies, and also a cafeteria for the students.

Special attention has been given to colour schemes throughout the building, with the idea of making it as attractive as possible for the small patients. A feature of the building is the children's Reception Hall, which is attractively decorated, and has brightly coloured toys and miniature furniture for the children, as well as the more normal type of modern furniture for the use of mothers who are waiting.

Communication throughout the building is by telephone and radio call system. For calling patients, there is a special signal system between the clinics and the Reception Hall.

The School Dental Service in New Zealand

Teaching equipment includes apparatus for visual education—epidiascope, film-strip projector and sound-film projector, as well as dental and general anatomical models.

Much thought was given to the deadening of sound throughout the building, and sound-absorbing materials have been used to good effect in ceilings and floors. Even when working to full capacity, with more than a hundred people in it, an almost uncanny stillness pervades the main clinic. Such sounds as footsteps, the impact of instruments on hard surfaces, and the occasional whimper of a small patient seem to be swallowed up in the vastness of the room.

During the progress of the expansion program, an annex to the new Training School is in operation in another part of the city. The building used for this purpose was formerly the official residence of the Prime Minister, and it was handed

over to the Dental Service five years ago, when the scheme for the rapid expansion and completion of the system was embarked upon.

During the period of their training, student dental nurses live in hostels which are under the control of the Matron of the Training School.

The Principal of the Training School is responsible to the Director of the Dental Division of the Department of Health for the efficient training of school dental nurses. He is assisted by a staff of dental surgeons and senior dental nurses. The latter are selected for their special qualifications and long experience in field clinics. Each instructor is responsible for certain subjects in the curriculum, and all participate in clinical instruction, for which purpose there is normally an instructor to every ten chairs.

There are two qualifying examinations—the Primary examination at the end of

The Main Clinic





A New Zealand Dental Nurse

the first six months and the Final examination at the end of the second year. The latter is conducted by an external examiner (a practising dentist of recognized standing) in conjunction with a Dental Officer of the Department.

After successfully completing their training, the dental nurses are drafted out to school dental clinics in various parts of the Dominion, where they come under the immediate control of the Senior Dental Officer of the District in which they are stationed. These District Con-

trolling Officers are responsible to the Director of the Dental Division for the efficient operation of the School Dental Service within their district.

Throughout the twenty years during which the dental nurse system has been in operation, these young women have attained a reputation for efficiency and enthusiasm. They have proved themselves to be very adept in handling young children, and they maintain a standard of operative work which has consistently won high praise from independent persons who are qualified to judge.

Dental Health Education occupies a prominent place in the activities of the School Dental Service. Student dental nurses are made familiar with accepted theories in regard to the cause and prevention of dental disease, and are informed regarding the research work that is being done on the subject. They undergo a short course in the principles of teaching at the Teachers' Training College, and many of them show considerable aptitude and ingenuity in interesting children in the principles of dental health.

About fifty per cent of the Primary school pupils of the Dominion are now receiving regular and systematic dental attention every six months, and this percentage will rise rapidly during the next few years. A stage has been reached when the extension of the service so that it will embrace all Primary schools is in sight.

Experiments on mice have shown Nobel Prize-winner Dr. Alexis Carrel that longevity, though a hereditary tendency, can be modified by environment. He kept some of his rodents in small boxes, while others were allowed to run free around a greenhouse. Both classes were fed on identical diets, but the greenhouse mice had a life 34 per cent shorter. This, concluded Dr. Carrel, was the price paid for liberty.

Fasting, Biologist Carrel found, is a valuable help towards attaining old age. Mice whose forebears had been subjected to a rigid fasting régime for a couple of generations, had a 17 per cent greater expectation of life at weaning than their normal brothers. They were smaller but stronger and healthier, and very much more intelligent.—News Review.

Canadian Dental Corps*

by CAPTAIN W. J. GIBSON

No. 17 Co'y, C.D.C., (A.F.), R.C.A.F., Western Air Command

MAY I first speak for the dental officers present and express our appreciation to the District Dental Officer and the Command Dental Officer for the arrangements they completed to make it possible for us to attend this meeting.

To some of you who have never had or never availed yourselves of the opportunity of attending a meeting of this kind, I'm sure it has been a revelation to see the progress that dentistry is making. Certainly it gives that incentive and stimulation we all need periodically. The personnel of the Services will surely benefit by the added knowledge we have gained today.

As you know, it costs the country money for us to be here, so we must do our part as well. This was not planned by the authorities as a "joy ride" but an opportunity for us to improve our skill in dentistry and therefore, benefit the Service. At a luncheon meeting today, Dr. W. J. Ferrier of Seattle paid a fine tribute to the C.D.C. He is very much impressed with our organization and the topic of his short luncheon address was "The C.D.C." Dr. Ferrier commenced his remarks by saying: "I have never been impressed so much before with anything as I have been today and the reason for that is the splendid organization and reputation the C.D.C. is building for itself." Major Fraser Allen had shown him the splendid display of equipment, including the portable x-ray, and explained all the details.

Dr. Ferrier also remarked that the C.D.C. is far ahead of any similar organization and he attributed it to efficient

organization methods from the beginning, by our Director of Dental Service and his selected administrative personnel. He pointed out that a considerable percentage of the drafted men in the U.S.A. are being rejected because of dental defects and when that is so, there is something wrong. It certainly is not the fault of the dentists, as the dental profession today can take these men and make them dentally fit, but, at present, they are not being given a chance to do it.

Dr. Ferrier was proud of our rubber dam technique in operative dentistry. He said, "That, and that alone, will put the Canadian Dental Corps in first place in the world today as to performing a masterful service." He has found, in his vast experience in operative dentistry, that most dentists were honest and tried to do honest work but it was impossible for them to do so as they could not see properly in a sea of saliva and their restorations did not have a chance to stand up in a moist cavity. It is an honour to our C.D.C. to have these remarks made by so great an authority as Dr. Ferrier.

As we are all here together as brother officers of the C.D.C., it is not my purpose to enter into a summing up of our organization to date, as we were all fortunate, a month or so ago, in having the pleasure of hearing first-hand from Colonel Lott of the trials and tribulations he had gone through to bring us this far. I'm sure you will agree with me that we have a firm foundation and a record to date of which we may be justly proud.

Our branch of the Service differs from most branches in that, when we enlist as

* Presented to Dental Officers at the annual meeting of the B. C. Dental Association, Vancouver, B.C., on May 3, 1941.

dental officers, we carry on the same work that we did in civilian life. That is the way we are rendering our service to the Empire and, believe me, we see every hour of the day how much we are needed and what we are doing for the personnel of the Navy, Army and Air Force. We wear a military uniform and it is very important that we spend a certain amount of time in familiarizing ourselves with the set-up of our military organization so that we may conduct ourselves as a true military officer should, and therefore be a credit to our Corps. Our Military set-up places us in an entirely different environment, but when we stand at our posts in our clinics and look around, we see dental equipment and instruments with which we are all familiar.

Now, this is our work. The Army, at present, is our life, and it is very fair in regard to the amount of time we must work and also in regard to time for recreation in order for us to keep fit.

Today you have heard papers and seen clinics at this meeting and it is the hope of the C.D.C. that you have received a lot of food for thought and that you will be enthusiastic about dentistry because we, the C.D.C., are "on the spot". The dental profession of Canada and the U.S.A. is watching every move we make so it is up to us to be enthusiastic about our dentistry so that the C.D.C. will build a solid foundation and earn an enviable reputation. The powers that be know full well that they cannot make specialists out of every dental officer in the C.D.C., and they certainly have no intention of doing so, but the techniques you have seen today can be mastered by any dental officer of average ability, and, when mastered, I can assure you, they are definitely time savers.

The C.D.C. Headquarters is providing the finest in equipment and materials and our quota is very fair; one operator to every five hundred men. Civilian statis-

tics show us that there is one dentist to every 1000 to 1500 of the population. The men who are at the top of the ladder in dentistry today are men who are doing fine operative dentistry. They have had the courage and enthusiasm to become skilful in doing fine operative dentistry. It can be done by any one in this room. Have you ever stopped to think, when you were shopping in a jewellery or art store and see all the wonderful creations that are fashioned by human hands, what an opportunity we have in dentistry of becoming skilful in building fine restorations and the thrill it will give in doing so.

One of the men I admire most today is a dentist who has practised dentistry for over fifty years. He made himself proficient in the early years of practice in doing fine cavity preparation, belonged to study clubs and studied gold foil under Dr. Wedlestat in the old Tacoma Study Club. Today his greatest thrill is to see these old patients coming into his office and seeing the work he placed in their mouths twenty-five to thirty years ago (I have seen some of it) which is still doing service and is a credit to him. In fact that is his greatest stimulus in life. It gives him the urge to carry on.

I sincerely hope that in twenty to twenty-five years we shall have dentists who will be able to say, "I had a patient in today who had some work done in the C.D.C. twenty years ago and it is still rendering a fine service."

As I said before, we are "on the spot" and it behoves each and every one of us to put our shoulders to the wheel. You, as dental officers, have been carefully selected. Everyone who applied has not been enlisted. We hope you will not fail the profession in your effort to do fine operative dentistry. The personnel of the Navy, Army and Air Force deserve the finest service that we are capable of rendering. To make every mouth dentally

CAPTAIN W. J. GIBSON



fit is the objective of the C.D.C. but in order that this may be done, not as a temporary measure but as a lasting service, it is imperative that we keep our ideal constantly before us and strive to maintain it by improving our technique. We have all sacrificed our civilian practices which now enables us to render a service to the Empire. We are just beginning to lay the foundation of the C.D.C. Let that be the greatest effort we have ever made in dentistry. This foundation must be firm and sound so that the future of operative dentistry in the C.D.C. will be a credit to us and the dental profession.

As dental officers we have distinct advantages in serving with the C.D.C. inasmuch as we are not called upon to write a cheque for our monthly rent, supplies, and other expenses connected with civilian practice. We have no longer to worry about entering into financial contracts with our patients, nor do we experience any of the worries connected with the carrying out of such contracts. Now with this perfect set-up, the thought I would like to leave with you is to help keep the C.D.C. on a par with our civilian practitioners or even ahead, but certainly

not behind. Colonel Lott told us that if there was anything not on our Stores List and it was shown to be a necessity in bettering the dental service, he would obtain it for us. To date I am happy to say we have received materials which we have ordered, not on the Stores List but which will be added to it. We are just beginning. Who knows, one of you in this room may invent something that will revolutionize some phase of dentistry, and there certainly is no reason why you can't train yourself to be a more skilful operator than you were when you came into the C.D.C.

Our young graduates entering our Corps is something we must view with grave concern. We must give them our counsel and guidance. We must help them to build a fine character, to mould their future so that they may be fine professional men and skilful operators able

to take their place in the dental societies of the future.

It behoves us all, when we go back to our stations, to think about dentistry, to think about what can be done in dentistry and strive to improve our skill.

In centres where large clinics are in operation, a dental officer should present a paper on some branch of dentistry at least once a month or, better still, once every two weeks. One evening a week could be designated as Dental Study Club evening. The D.D.O. or C.D.O. has the power to make this a command. Models from extracted teeth can be prepared such as you have seen at the meeting here today. Make yourselves a power in dentistry. I know of no other way for us, the C.D.C., to command the respect of the dental profession than to strive to do fine operative dentistry and have dental officers in large centres appear on dental society programs. This will also be our greatest stepping-stone to attract the higher type of professional man into our organization. In large training centres where five to ten chair dental clinics are established, they may be patterned after our successfully run civilian institutions such as the Mayo Clinic. There, certain men do one thing and one thing only. The most outstanding exodontist is selected and, with a thoroughly trained assistant, he would do all the surgery. Two operators could be selected for denture work and the balance for operative dentistry. In that way the men are doing the type of dentistry they like best and the patients, without a doubt, will receive a better service. It could be so organized and systematized as to produce more work with a very high standard. The only argument against an arrangement of this kind is the transfer of operators and of course if they are transferred they would have to be replaced with the next best man available. Of course this is only a suggestion and

would have to be sanctioned by the D.D.O. or C.D.O. in charge of the particular District and also by the officer in charge of the clinic.

As a further suggestion in regard to the formation of a Study Club, a fund could be raised to buy any incidentals necessary for study purposes which are not on our Stores List. This need not be large—twenty-five cents a week from each officer and maybe ten cents a week from other ranks would suffice. Any of us will throw four times that amount away in the Mess in ten minutes.

I hope this meeting has stimulated you as much as it has me. I get my greatest enjoyment out of dental meetings. Every time I went to one in civilian life I would go back to my office enthusiastic about dentistry. We all have to be stimulated very often. My vision of operative dentistry was changed at a meeting of the B.C. Dental Association many years ago by a clinic entitled "Application of the Rubber Dam" by Dr. O. A. Anderson, Seattle, Wash. By quite a coincidence this clinic is being repeated on our program today. For this reason I cannot close without putting in my plug for the use of the rubber dam as I know what it has done for me in dentistry and I know that it will do the same for you.

To be a dentist that will be heard from in the future, you must master the rubber dam technique as the first fundamental step in fine operative dentistry and you will have laid for yourself a foundation that will never break down. It will give you a vision of dentistry that you never had before, a stepping-stone to greater things in dentistry and may I never hear, after the war, from the laity, "Oh let's not go to him, he was an Army dentist," but rather, "The Dental Corps did wonderful work during the war. If we go to one of the ex-army dentists we will make no mistake."

Canadian Dental Hygiene Council

by HARRY S. THOMSON, Field Secretary
(Condensed from 1940-1941 Report)

THE Canadian Dental Hygiene Council is carrying on. It is continuing its Dental Health activities with its usual earnestness, and endeavouring to co-ordinate these with war-time needs.

During the past year our program has been an extensive one, embracing activities in every province. One of the new projects inaugurated last year was a course of lectures in Dental Health Education, given to the teachers-in-training in the Normal Schools of six of the nine Provinces. Instead of providing teaching aids and printed material at that time, the students were advised that as soon as they had actually begun teaching, if they would write in to the Dominion Headquarters of our Council, these would be mailed to them. This year, during the first two weeks of September, at the opening of the new school term, 483 requests were received from new teachers—a new army of potential health educators.

Requests were received as follows:

Alberta	224
British Columbia	28
Ontario	68
Newfoundland	1
Saskatchewan	94
Quebec	9
Manitoba	21
New Brunswick	19
Nova Scotia	19

We believe that this particular piece of work has been most valuable, and will give far-reaching results.

ONTARIO

An intensive program of Dental Health Education was carried on for four

months in Ontario, chiefly in the North-western section, in co-operation with the Provincial Departments of Health and Education and the dentists of the Province.

The Canadian Dental Hygiene Council contributed \$2,000.00. The Dental Associations contributed \$700.00 and the Government Departments equalled these amounts through printed material and organization assistance. Talks were given to all school children from Grade I up through High and Technical Schools. Addresses were also given to many Women's Organizations and to Service Clubs; really a cross section of every community visited was reached, and literature suitable for all ages distributed. Interest of the people in these areas has been aroused, as evidenced by the newspaper publicity and the fact that many of these communities are now planning to provide Dental Health services for their children. Service Clubs and Welfare Organizations have come forward with offers of financial help to aid in establishing these school dental services.

SASKATCHEWAN

In Saskatchewan, our Council made a grant of \$250.00, the Provincial Dental Association also made a grant of \$250.00 and the Department of Health contributed \$5,000.00 to carry on a program in the drought section and a three weeks' educational campaign in the cities of Moose Jaw, Saskatoon and Regina.

MANITOBA

In Manitoba our Council made a grant of \$250.00, the Dental Association

The Journal of The Canadian Dental Association

\$250.00 and the Government a grant of over \$1,000.00.

NOVA SCOTIA

Our Council and the Nova Scotia Dental Association each contributed \$250.00 towards a program conducted by the Provincial Department of Health. A fully equipped Mobile Dental Clinic was provided by the Government at a cost of over \$2,500.00 and the full time services of a public health nurse. The clinic trailer could be readily attached to a motor car, and driven by the nurse from place to place. The nurse would then make a survey to determine the need, arrange for a local dentist to give treatment, and the local community would make a financial contribution toward the cost.

BRITISH COLUMBIA

In British Columbia our Council made no money grant but carried on the Normal School program and is giving organization assistance, data and material aid to the Department of Health, where a Dental Division with a full time Dental Director is being developed.

ALBERTA

In Alberta the Council made a grant of \$250.00 in 1939 which was not used until last year. It was supplemented by \$250.00 from the Dental Association and \$1000.00 from the Department of Health.

QUEBEC

In Quebec the dentists and the new Government are endeavouring to work out a province-wide plan for dental services in connection with their Health Units. The Council is acting in an advisory capacity.

PRINCE EDWARD ISLAND

In Prince Edward Island interest in dental health has steadily increased since our campaign there a few years ago. During the year a visit was made to the Province and a conference held with the Deputy Minister of Health to discuss ways and means of extending their program.

The Canadian Dental Hygiene Council is carrying on.

Conventions

17TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, CANADA, SEPTEMBER 24-26, 1941.

Secretary, A. D. Richardson, 1240 Union Avenue, Montreal.

AMERICAN ACADEMY OF PERIODONTOLOGY, HOUSTON, TEXAS, OCTOBER, 23-25, 1941.

64TH ANNUAL MEETING OF THE EASTERN ONTARIO DENTAL ASSOCIATION, OCTOBER 27-28, CHATEAU LAURIER, OTTAWA, ONTARIO.

AMERICAN DENTAL ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

17TH ANNUAL SESSION OF THE AMERICAN DENTAL ASSISTANTS ASSOCIATION, TEXAS STATE HOTEL, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

GREATER NEW YORK DENTAL MEETING, DECEMBER 1-5, HOTEL PENNSYLVANIA, NEW YORK.

A program will be sent to any Canadian dentist upon request.
Percy T. Phillips, Chairman, Room 106A, Hotel Pennsylvania, New York.

The Forum

• EROSIVE LESIONS OF THE LIP

FREQUENTLY patients present themselves to the dentist with an eroded, encrusted lesion of the lip. The patient may or may not have this lesion as his chief complaint. It is the duty of the dentist to make an examination and diagnosis of such a condition before he progresses with his examination to other parts of the mouth, even though this lesion was not responsible for the patient seeking the advice of his dentist.

The three lesions most frequently encountered in this area are:—

1. Herpes simplex.
2. Primary sore or chancre.
3. Carcinoma or cancer.

Differential diagnosis:—

1. Any erosive lesion present on the lip for more than two weeks without showing visible change is almost certainly not herpes simplex.

2. Such a lesion on the lip of a young patient, which has a flat indurated base, is painless, oozes much fluid on cracking, and has associated lymphnode involvement, is almost certain to be a chancre.

3. Any eroded or ulcerated lesion present for more than two weeks on the lower lip of an elderly male patient should be considered carcinoma until proven otherwise. Carcinoma has a highly evasive, large indurated base, bleeds easily, is non-painful, and has late lymphnode involvement compared with the early involvement in chancre. Frequently a history of leucoplakia precedes the development of the lesion. Biopsy should confirm the clinical diagnosis and dictate the treatment.—*Jour., Michigan State D. Soc.*

• TRENDS IN NUTRITION

SPEAKING on "Trends in Nutrition"

(Brit. Med. Journ., 1941, January 18, 73), Sir John Boyd Orr pointed out that while vitamin concentrates are useful in the treatment of gross deficiency diseases they are less valuable in dealing with minor degrees of malnutrition because poor diets are deficient not in one but in many constituents. In tests the improvement obtained by giving one nutrient such as vitamin A was negligible, compared with the improvement obtained by giving milk. This was well shown in the case of the teeth. Deficiencies of vitamins D, A and C, of calcium, and of magnesium; the effect of carbohydrates in promoting the growth of *B. acidophilus*; mechanical chewing which affected the growth of the jaws and tooth-spacing, all helped to determine the condition of the teeth. But the correction of any one of these factors would not ensure healthy teeth. Schiötz found that of children who had perfect teeth some had had cod-liver-oil, some not; some had been given sweets, some not; some had brushed their teeth and some not. But every child who had perfect teeth had had an abundance of milk and green vegetables regularly, without a break. This presentation of the case seems to us a fair one and more worthy of propagation than those which more narrowly ascribe dental health and disease to single factors.—*Br. D. Journal.*

• THE FUTURE OF DENTAL SERVICE

THE ultimate aim must be a system designed to secure adequate dental treatment for all who are in need of it and

there is much to be said for divorcing the health services for the adult population from the Insurance Scheme and making both medical and dental treatment parts of a State service freely available to every member of the community. If this were to be done it would be possible to co-ordinate preventive and curative measures to a degree which is almost impossible under existing conditions.

A State service, whilst it would seem to offer the readiest means of achieving a proper degree of co-ordination, is not necessarily the only method of organization by which the treatment of various age groups could be effectively linked together, but whatever method of organization was ultimately selected, whether State, Regional, or a combination of either or both with an Insurance system, it is obvious that a complete system will entail a considerable increase in the number of salaried dentists and that the tendency in the future will be for all work undertaken for the State to be remunerated either on the basis of whole, or part-time salaries or on that of a capitation rate, methods which might well be combined in one scheme.

It is clear that whatever scheme or schemes are ultimately adopted and no matter what is to be the method of remuneration of the dentists engaged in giving the necessary treatment, the numbers of the profession are inadequate to deal with the amount of treatment which is at present required. It is, therefore, necessary on the one hand to take measures to educate the population in the necessity for dental hygiene and on the other to see to it that the conditions of employment and remuneration shall be

framed so as to make the dental profession sufficiently attractive, in comparison with other professional careers, to ensure the necessary expansion in numbers.—*Excerpts from editorial in British Dental Journal, July 1, 1941.*

• WHAT ARE THE OBJECTIVES OF A SCHOOL DENTAL SERVICE?

by E. A. GRANT, D.D.S., Toronto, Ontario

1. Education of parents and children on the importance of caring for the teeth and how to prevent or reduce dental disease.

2. Yearly mouth examination of all school children and report to parents of conditions found.

3. Treatment for those unable to secure private treatment, by which an endeavour should be made to:

(a) Preserve the first teeth by early small fillings until time for their normal replacement by the secondary teeth, thus promoting health, growth, and nutrition, reducing the danger of infection arising from the mouth, and preventing irregularities of the teeth.

(b) Preservation of the six-year molar. Over 75% of these teeth have a developmental defect in their biting surface, which if not corrected by an early small filling, may result in the loss of this important tooth.

(c) Prophylaxis, or the cleaning of the teeth by the dentist, and training the children in the use of the toothbrush.

(d) Removal of all infected teeth, which cannot be restored to a healthy condition, so that they may not be a menace to the child's health, or a cause for absence from school.

Patience and tenacity of purpose are worth more than twice their weight of cleverness.—T. H. Huxley, in Dental Record.

Down Hitler With Dollars—Buy War Savings Certificates Regularly!



PRINCE EDWARD ISLAND



D. T. Waye, Charlottetown

NOVA SCOTIA



S. G. Ritchie, Halifax

NEW BRUNSWICK



Harry H. Peters, Saint John

Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

MANITOBA



J. F. Morrison, Winnipeg

SASKATCHEWAN



F. C. Harwood, Moose Jaw

ALBERTA



John Clay, Calgary

BRITISH COLUMBIA



J. S. Bricker, Vancouver

The Future of Dentistry in Canada

Last year we celebrated the One Hundredth Anniversary of the founding of the first dental college at Baltimore. What a hundred years has done for the dental profession reads like a fairy story so great has been the achievement in this comparatively short period. But now is the time to look forward—not backward. The great advancement of the future will be in the field of biology, physiology and in the problems involved in rendering dental health service to the masses of people who at present do not know what it is all about. In this development organized dentistry must play a leading role and for this reason, I would urge the dentists of Canada once again to support loyally the Canadian Dental Association, for upon the efficient functioning of this coast to coast organization will depend the future of our profession as a whole as well as the future of the individual dental practice. Opportunity stands at the door and knocks. If we admit this heavenly messenger we will be made glad and strong. If we turn our backs, we will some day realize that, "This could but have happened once and we missed it, lost it forever."

I know that there are some men in our profession who give the pro-

verbal answer to any appeal for support for our C.D.A.; namely, "The time is not opportune," or, "This is no time to talk about spending more money, when taxes have been so greatly increased and there are so many more calls upon each one of us for various charities," etc. It is evident that their ideals are weak and rickety and because they run contrary to the finest instincts of the dental profession, they have placed themselves out of step with the forward march of dentistry. It is high time that we were unmasking false gods and wrong systems and getting on with the job of doing something for dentistry.

In the popular novel "Gone with the Wind" Scarlett O'Hara frequently said, "I won't think of it now, I'll think of it tomorrow." This was a catch phrase which made a wide appeal, an appeal because so true to life, so true of many dentists in facing the problems of dentistry in these days. The fact is that we must think of it now. Problems are facing us, the solution of which will not wait. In discussing these problems I am not appealing to those hopeless few who are well described by the Very Rev. Dean Inge in these words: "Don't be a pioneer. It was the early Christians who were thrown to the lions. The safest mountain paths are those travelled by mules and asses. Follow them." I am appealing to those sincere, but uninformed dentists, who are asking, "What is all this C.D.A. business about anyway?" or words to that effect. I would point out just a few of the problems which our Canadian Dental Association should be working on at the present time.

School Text Books—First of all, we need to review the text books in the schools of Canada as to the teaching on mouth hygiene with the thought of improving the health information contained therein and making such teaching uniform throughout Canada.

School Dental Service—We should review the school dental service throughout our Country. There is at present much dissatisfaction in various parts of Canada with regard to this service. In the May Journal there appeared an editorial dealing with this question so it need not be discussed fully here. I am convinced, however, that the fee paid to dentists for this kind of service will have a marked bearing upon what dentists are going to be paid by the Government when a certain amount of socialization of our profession takes place. In Winnipeg the brick-layers, the stone-masons, the plasterers get \$4.40 for a half day's work. Why take six years to go to College, involving so much time and expense and then work for about the same financial reward as these tradesmen? We, as a dental profession, should do something to correct these conditions.

Conditions of Dental Practice—We should study the conditions of dental practice throughout Canada and try to raise our standards. We should make test experiments with the co-operation of local dentists. This would necessitate, in the first instance, a comprehensive questionnaire so as to know just what the problem really is. That there is a problem is undoubtedly true.

Liability Insurance—There is the problem of liability insurance. If this

matter were handled on a national basis it would be to the advantage of every dentist in Canada.

* *Dental Legislation*—There is the question of adverse dental legislation at Ottawa. A short time ago prophylactic brushes and several other necessities were placed on the prohibitive list for entry into Canada from the U.S.A. This has been corrected through the efforts of our Legislative Committee of the C.D.A. A short time ago the position of dentistry relative to the Unemployment Insurance Act arose. Nothing was done about it because we are not organized to do very much about anything. In the opinion of this writer this Act will work out to the detriment of our profession. Recently there arose the problem of the disposal of gold scrap under the Unwrought Metals Act. There is the question of tariffs, taxes, mail-order dentures, convention expenses and many other problems which can only be dealt with efficiently by a well organized National Association.

Provincial Legislation—We have the problem of adverse provincial legislation affecting the interests of dentists in other provinces. For instance, I am told that in Calgary and Regina all children can apply for dental treatment in the School Dental Clinics, regardless of how well-to-do their parents may be. In my opinion, school children should not be taught that the State owes them dental health.

Dental Unfortunates—The care of the unfortunates in our profession, those who have reached old age with no visible means of support is becoming an ever increasing problem. An elderly dentists' home has been suggested. This is probably not the solution but some plan should be worked out so that at least a little help can be given to these men or their dependents, who are in need. At present our thoughts in this direction are chaotic. At times I am chagrined that dentistry is so impotent to deal with such problems.

Industrial Dental Service—The control of industrial dental service is going to present a real problem in the future. A suggested plan would be for organized dentistry to appoint a full-time dentist in a given industry whose duties would be to relieve pain, take x-ray pictures, give a diagnosis and refer the patients to their own dentist, but when this dentist is appointed by the industry and works on a part-time basis and refers all these patients to his own office or to a group selected by himself; or when the firm appoints dentists on a salary to do all the work necessary in the industry then problems arise which affect every practising dentist.

Foreign and Empire Relations—Foreign and Empire Relations as a subject, means very little to the average dentist but involves many important phases. You have read in the Journal a little of what has been going on in connection with Guy's Hospital in London and what this Hospital and many others have gone through. In the late December raid on London, it was said that Guy's was surrounded by a blaze of fire which seriously rivalled Dante's inferno. We dentists in Canada have not experienced the shattering blasts of high explosives, the earth-shaking thunder of anti-aircraft, the endless

ripping of machine guns. British dentists have felt all of these things. The dentist goes to his office in the morning, or where his office was the night before, and finds that it has dissolved into clouds of débris; or he returns home, or where his home was, and finds but a heap of disorderly rubble of bricks and beams. Perhaps there have been gaps in his family or among his friends—an unrelenting nightmare of screaming bombs, falling masonry and crackling flames.

A short time ago our C.D.A. Secretary received a letter from England pointing out the urgent need for funds by the Ivory Cross and appealing to the Canadian Dental Association for help. It was stated that the demands for assistance from the dependents of men in H.M. Forces have steadily increased and that they have to turn away hundreds of appeals. I ask, "Will they receive sympathy in Canada?" If they do, it will come through the efforts of the C.D.A.

In a letter which I received from Dr. Ryan, Editor of *The Dental Digest*, just before the fall of Greece, he says, "You'll be interested to know that both the American Dental Association and the International College of Dentists are giving close attention to the matter of setting up some organization for aid to the dentists of England, Greece and possibly China."

You will have noticed in the May Journal that in response to an appeal from England for dental equipment, especially portable x-ray apparatus, a Harvard Committee on Dental Aid to Britain was formed early this year. At a benefit lecture and musicale held in Boston under the sponsorship of this Committee, \$1,500 was raised to purchase and send x-ray equipment to England.

It was stated over the air some weeks ago that a Greek peanut vendor in New York City, because of the aid Britain had given his country, decided to donate to the British Aid Fund all his profits for one day so he himself put on a British Aid Fund Day. Ordinarily his profits would amount to \$1.50; however, following this special day he proudly showed his friends a receipt for \$53.80, which amount was his profit on this special occasion and which profit had been turned over to the British Aid Fund.

What are we, as Canadian dentists, doing about this problem? I know that as individuals we are supporting many war charities. The Halifax Dental Society recently donated \$50 to the Queen's Canadian Fund for the relief of air raid victims in Great Britain, but I would like to see the dentists of Canada, as a group, make a definite contribution in aid of the dentists of Great Britain in their present hour of need. Could we not donate, say, one day's income to help these British dentists in their magnificent fight for freedom? This can best be handled through the Foreign Relations Committee of our National Association or some Committee appointed specifically for the purpose.

Public Dental Health Education—We, as dentists, have a wonderful story to tell and we should be shouting it from the house tops, over the air,

by magazines, newspapers, pamphlets, by lectures before all organized groups, by window displays and theatre publicity. Naturally this can all be carried out more efficiently by a national organization, as compared with any provincial organization. Our people spend as much on candy and confections as on dentistry; half as much again on radios and musical instruments as on dentistry; half as much again on dog bills and veterinary fees; half as much again on jewellery and silverware; nearly twice as much on cosmetics as on dental service; over twice as much on liquor; over twice as much on sports and games; four times as much on tobacco; over four times as much on beer; five times as much on motion pictures and over fifteen times as much on automobiles, new and used, as on dental service. We certainly have a great field in which to educate the public upon the relative importance of dental service as compared with these other non-essentials, and for which non-essentials they are spending the major portion of their incomes, after food and clothing have been provided.

Dental Students—We should encourage the right kind of students to enter the dental profession by proper general educational methods. This would do more than anything else to raise the status of the dental profession in the minds of everyone. We should have many adequate scholarships so that the finest dental education available could be given to the most promising young men regardless of the credit rating of their fathers. In this way more brilliant scientific minds could be brought into the dental profession.

Post-graduate Courses—As a National Association we should plan for post-graduate courses and study clubs in all parts of Canada. We have been woefully weak in these matters. I believe that outside stimulation would help. The C.D.A. should bring leaders from other countries and have them tour Canada in the interests of our profession. We should not turn to our mechanical laboratories to supply or plan our post-graduate courses for us.

Consultation Board—I would suggest that a Consultation Board be set up by the C.D.A. to assist men who are having difficulties in practice. There are the difficulties of patient approach, difficulties of office management, difficulties of collection, the difficulty in meeting competition. These men should be helped and could be helped. From letters received as Editor of the Journal, I believe that this is a great problem facing the dentists of Canada today.

Lectures—We should be in a position to supply material for public health lectures including charts, models and moving pictures.

Research—Very little dental research of a practical nature has been done in Canada, and when I use the word "research" I don't mean exactly what is usually meant when that term is used.

The steel industry in the U.S.A. currently spends more than \$10,000,000 annually on its research. More than 2,550 engineers, metallurgists, physicists and other technical experts are now employed in the research laboratories of the steel industry. 33c of each research dollar goes into the study of im-

proving the quality of steel; 28c, into finding new uses for steel; 20c, into finding new products, and 19c, into improving methods of production.

How much are we, as dentists, spending on research in our own interest as well as that of the public? We spend a lot of time studying how to make a better inlay or denture but how much time is spent on finding out how to produce the same in half the time? Some of you can insert an inlay in a fraction of the time it takes another to do so, due to short cuts in technique. What do we know about the principles involved? What do we know from a research standpoint as to what is the ideal arrangement of office furniture, equipment, the proper colour scheme, the best form of ventilation and a hundred and one other things which enter into the everyday successful practice of dentistry? We spend practically nothing ourselves but look to the dental dealer or the manufacturer of dental products to advise us. This is not as it should be.

We need advice, also, on the duties of an assistant, and how two assistants can be profitably used in many practices. Too many men cannot see the advantage of employing even one.

Advertising—Our National Association should be in a position to assist the weaker provinces in dealing with the problem of advertising.

Manufacturers—We should be in a position to co-operate with the dental manufacturers and dealers in the interests of all concerned. Only a national organization can hope to deal with this matter.

Location Opportunities—We should keep track of location opportunities in all parts of Canada and be able to advise the young dentist as to where the opportunities are greatest for him to commence practice. Even the dentist who has been in practice for many years often desires to move to another location.

Government Contracts—We should watch Government Contracts and prevent the cutting of fees. Public opinion at present is based on quantity of dental service rendered and not on quality.

The Indian and the Eskimo—The care of the teeth of the Indian and the Eskimo presents a problem for the dental profession of Canada. At present this service is most inadequate.

The Indigent—The care of the indigent should be the responsibility of the Government and the dentists should receive adequate remuneration for this service, and which he certainly will not receive if dentistry is not well organized to meet this coming challenge.

Low Income Groups—Our policy re the dental care of the low income groups is becoming rapidly a burning question.

The fact that dental defects are so prevalent in those seeking admittance to our fighting forces means, if it means anything, that something will be done about it. When those outside of dentistry take the initiative which we should now be taking, we may not fare as well as we would like. It is not necessary to harm dentistry or the dentist in order to provide dental service

for all, but dentistry itself must provide the solution. We are morally bound to do so and in the interests of self-preservation we are forced to do so. Here is something serious to think about. When a man becomes a victim of dental neglect and ill health it follows that society, as well as the man himself, suffers.

In a recent report of the Farm Security Administration in the U.S.A. it was stated that 70,000 low income farm families, or about 300,000 persons, are banded into small groups to obtain medical care at a cost they can afford. In making farm loans it was found that sickness prevented success in repayment. It was decided that a family in good health was a better credit risk, so it was just good business to provide health service. The people have a choice of doctor, the fees are paid at the beginning of the period, and fees are based on ability to pay. The tendency in the U.S.A. is to organize separate dental care plans through co-operation with the organized dental profession.

These newer problems must be met. "Back to the Good Old Days" is a foolish statement. We cannot expect to continue to practise dentistry along the same lines as have been followed in the past, and for this reason it becomes so very important that we should organize in such a way as to be able to direct these coming revolutionary changes.

In the final analysis the permanent status of dentistry, as a profession, will be determined not by its scientific and artistic attainments, but by the degree in which it meets its social responsibilities.

Ethics—The question of professional ethics is a matter which should be standardized as far as possible throughout Canada, and the C.D.A. could render effective service in dealing with many local problems.

National Headquarters and Library—That we should have a National Headquarters and a National Dental Library goes without saying. Civilization follows the libraries. When the great library of Alexandria was finally destroyed by the Moors, culture migrated from the Eastern Mediterranean to the West. A University could lose its faculty and its students and begin again as a great University if its library remained great.

National Journal—Our Journal cannot continue to function on the present financial set-up. Are we going to build up our National Journal, (and we should have a dental journal for the public as well), or are we going to turn over our literary development as a profession to the supply house, manufacturer or ambitious individual? For the past seven years we have received 25c per member per year for the support of the Journal. The Journal costs us about 25c a copy. When publication was commenced it was known that \$1.00 per member was the minimum amount upon which a Journal could be published but funds have never been available to meet this payment.

Conclusions—This is simply a synopsis of what I consider to be some of the aims and objects of the Canadian Dental Association. In order to make

this Association function properly it was decided to raise the dues to \$4.00 per member. Personally, I believe that these dues should be at least \$10. Such would not be an expense but a marvellous investment, returning dividends out of all proportion to the investment. However, if and when the dues are raised to \$4.00 the budget for the C.D.A. will naturally be based on \$4.00 from each dentist in Canada. If, after all plans are made, and salaries agreed upon, 25 per cent of this amount is not made available on account of a quarter of our dentists having entered the Dental Corps, as has been suggested in some quarters, then the whole national dental set-up would collapse and in my opinion this should not take place. I believe that we should pay the dues of the dentists in the Corps no matter what the amount of the dues are. If the dues are \$4.00 and 25 per cent of the dentists enlist that would only mean \$1.00 extra from those in private practice, and this should prove no burden to anyone.

It was our first great Prime Minister, that famous statesman, Sir John A. Macdonald, who evolved the national policy for Canada and came out with the ringing cry of "Canada First."

In our profession of dentistry, however, to think nationally is a somewhat new act; the thinking has been predominantly provincial. We have got to train men to think nationally, to consider the destiny of our nation as a whole at all times. We need such men and we need them badly.

One of the great epochs in the life of Israel was, when on the march to the promised land, they came to Kadesh-Barnea. Here with a stout heart and a great faith they had the opportunity of going forward into the land flowing with milk and honey. Instead, because of a fearful heart and no faith they muddled around in the wilderness for 40 years.

We, as a Canadian dental profession, have reached Kadesh-Barnea in our experience. Are we going forward into the land of promise or are we going to drift back into the wilderness for years to come? It is not sufficient to be on our way, we want to know where we are going. We are going to decide the future of dentistry in Canada and, I believe, we are going to decide it soon.

I am not interested in those visionaries who talk about the next great forward step in dentistry and then as soon as some practical methods are suggested to realize that goal, are the first to point out the shortcomings in these methods. I do not agree with those who favour a narrow provincialism. It is not a question of putting our own house in order and then leaving in abeyance any thought of the rest of Canada. The first man who is quoted as saying, some six or seven thousand years ago "Am I my brother's keeper," ended disastrously and so I believe that the individual or group who will presume to say it, today, will live to regret it.

We as a dental profession face a glorious task. The future of dentistry in Canada depends upon our decisions. Nothing is impossible. Leander would have considered it impossible to cross the Hellespont in an aeroplane. It wasn't but he did not know how.

Julius Caesar would have regarded it as impossible to flash his famous "Veni, vidi, vici," to the Senate by wireless. It wasn't, but he did not know how.

Nero never dreamed of riding down the Appian Way in a motor car.

The future will prove that things which seem impossible today are quite possible. It is utterly impossible said the Spanish priests to Columbus. As Dorothy Thompson says, "Possible and impossible are both relative terms. What is impossible under one kind of organization, one sort of moral awakening, one sort of program and leadership, is perfectly possible under another type of organization, morale and leadership."

Undoubtedly the next step in human progress, yes, in dental progress, must be an invasion of the territory of the impossible. To accomplish our purpose from a dental standpoint we must organize. We must have efficient full-time officers and particularly a full-time secretary, and pay him what is necessary to ensure his hearty co-operation and leadership. *Let us make this time a great epoch in the history of the dental profession in Canada. I say let us do everything we can to help the dental profession, help Canada, help Britain and the Empire, and let us do it with dispatch.*

I hope and pray that we may choose well before it is too late.

CORRESPONDENCE

Calgary, Alberta,
August 13, 1941.

To the Editor, Journal of the C.D.A.

Every dentist who has the interests of his country and his profession at heart, must feel a double sense of pride and satisfaction in the notable contribution to Canada's War Effort, which Dentistry is making through the Canadian Dental Corps.

We, in the profession, are peculiarly aware of the value of this work to Canada's contribution to the war and to each enlisted man,—a value not only for the present emergency, but one which will continue to benefit the country and many of its people long after the war is ended. Colonel Lott and his officers deserve and receive our highest praise for their capable management and operation of this important and necessary branch of the services.

I am sure I speak for the dental profession of Canada when I say that the needs of those who have enlisted are a first claim on Canadian dentists.

There is, nevertheless, an aspect of this activity which has caused concern in Alberta, and it has been suggested that it should receive publicity. In September, 1939, there were two

hundred and forty-one names on the register of the Alberta Dental Association. On July 1st, 1941, the number stood at two hundred and fifty-two, including enlisted men. At that date there were fifty-nine dentists of the province enlisted in the Dental Corps and two in other services, making a total of sixty-one. Considering only the Dental Corps this is an enlistment of practically twenty-five percent of the number on the register at the beginning of the war.

I note in the "Victoria Colonist" of recent date a Canadian Press dispatch from Ottawa referring to the C.D.C. Colonel Lott is quoted as saying that there are "about five hundred and fifty dental officers" in the Corps. This is thirteen point seven percent of approximately four thousand Canadian dentists.

At the present time there is a demand for a considerable addition to the total of enlisted dental officers. Canada's war effort is growing and the demands will be greater.

Since July 1, last, four other Alberta dentists have enlisted, and to my knowledge several additional men are seriously considering the matter. For a gain of five officers to the Corps there is a loss of two percent in service to

civilians in Alberta. The ratio at present is one dentist to approximately four thousand of the population, and the inadequacy of dental services particularly in rural areas can be illustrated by two of several similar conditions. From Edmonton east to the Saskatchewan border on the Wainwright line, a distance of two hundred miles, there is one dentist. From Red Deer west to, and including Nordegg, one hundred and ten miles, and on to the western boundary of the province, there is no dental service available.

It is true that to the present time the number on the register has slightly increased, but it is a fact that there is a greatly increased demand for civilian dental services. The number practising has been reduced from two hundred and forty-one at the beginning of the war to one hundred and eighty-five.

As a result two facts are causing concern in Alberta:

1. Civilian dental services are becoming more inadequate for growing dental demands. Should this shortage become more acute, the position of dentistry and the quality of dental service in this province, may well rapidly deteriorate. For example, at the present time, a group of laboratory men are preparing a private bill, to be introduced at the next session of the Provincial Legislature, asking that dental mechanics be permitted to practise purely prosthetic dentistry under license. There is even under present conditions a real danger of interference with the standard of admission to practise which has been recognized as necessary for the protection of the public.
2. At the end of the war the resettlement of over a quarter and perhaps one third of

the dental population of the province in civilian practice, will be a large problem. The enlisting of many more men coincident with new registrations will greatly increase the difficulties of those who will well deserve a place again in civilian practice.

As a result there is a strong feeling in Alberta that there should be a more equal distribution of the very justifiable calls of the Dental Corps on Canada's civilian dental resources.

(Signed) JOHN W. CLAY.

To the Editor, Journal of the C.D.A.

The following note was recently sent to a laboratory in Toronto by a prominent dentist.

"Please look over the enclosed 'models' and advise what method you would recommend for treatment. How much would the appliances cost? Yours Dr."

My reactions to this note are best expressed by an editorial in the American Journal of Orthodontics, May 1941, which concludes with the words:—

"To such cases in which the diagnosis is made and treatment actually directed by the mechanical laboratory, the board . . . should reverse its order and issue license to practise to the laboratory, and ask the dentist to show cause why his license should not be revoked on the basis that he depends upon unlicensed talent to diagnose and direct treatment of his cases."

For obvious reasons I would prefer not to have my name appear, but send it to you in token of good faith.

(Signed) ————— D.D.S.
May 30, 1941

"Real success in life is far away from the mere matter of making money. Some of the richest men I have ever known have been some of the greatest failures in life. Their riches have brought them misery instead of joy. Success in life is the possession of the ability to appreciate the higher things in living. Most of the really worthwhile things cost the least. Friendship, love of one's fellow man, love of nature, love of art, and love of music are among them.

"Many people make themselves miserable because they think that they have not as much money as they should have. Really the ideal state is the possession of a small income—enough, so that one is always in need of something, and which thus develops the spirit of work. The joy of existence is in growing, developing, working, learning to understand and to appreciate the good and the fine in everything".—
CHARLES M. SCHWAB.

DENTAL CORPS NEWS

News from Headquarters, Ottawa, July, 1941

Lt.-Col. George L. Cameron, D.S.O. V.D., Deputy Director Dental Service, Ottawa, carried out an inspection trip to Eastern Canada during June. No. 3 Dental Company was visited at Debert, N.S., just prior to its departure for overseas. Following that, an inspection of No. 5 Dental Company, which replaced No. 3 Dental Company, took place. No. 6 Coy. H.Q. and No. 15 Coy. H.Q. at Halifax were visited. No. 7 Coy. at St. John, No. 5 Coy. at Quebec and No. 4 Coy. at Montreal were visited in succession. All phases of their work were inspected.

On July 8th, Major Ira W. Hamilton, who has recently returned from overseas, gave an interesting talk on the radio program, "Back from the Blitz".

Capt. H. L. Windrim of No. 1 Coy., London, Ont., has been reposted as Adjutant to No. 6 Coy., Halifax, N.S.

Lieut.-Col. D. S. Coons, M.M., E.D. S.O.D.S. (Air), C.D.C. H.Q. Ottawa

Recent orders from National Defence Headquarters, Ottawa, announced the promotion of Major D. S. Coons, M.M., E.D., S.O.D.S. (Air), C.D.C., to the rank of Lieut.-Col.

Lieut.-Col. Coons served during the last war and received his commission in the field. He has served with the Canadian Dental Corps since its formation and is Liaison Officer between C.D.C. H.Q. and the R.C.A.F.

Hamilton, Ontario, is the home of this officer.

A mobile dental clinic was presented to the C.D.C. by the Workmen's Circle Branches at a picnic gathering at Pickering, Ont. The C.D.C. was represented at the presentation by Lt.-Col. H. G. Bean, Major Ira W. Hamilton, Capt. W. T. McIntosh, Capt. W. T. Gildner.

The Linitzer Sick Benefit Society and Ladies' Auxiliary also presented a dental clinic. It was received by His Worship, the Mayor of Toronto, on behalf of the Red Cross and turned over to the C.D.C. Lt.-Col. H. G. Bean and Major I. W. Hamilton were present and Major Hamilton spoke of the value and need of such units.

Arrangements are being made to conduct instructional courses in the use and care of x-ray equipment and the processing of films. These courses will be held in each Military District and will be attended by selected chair assistants and the instrument repairer of each dental company.



NEWS FROM THE PROVINCES

MANITOBA:

Winnipeg Dental Society

On August 13 the Winnipeg Dental Society was honoured by a visit from Dr. A. D. A. Mason, Dean of the Faculty of Dentistry of Toronto University. Dr. Mason was on his way to California, accompanied by Mrs. Mason, to address the State Dental Society. His subject was the dentition of the famous Dionne Quintuplets. As may be supposed and perhaps generally known to the dental profession the Quints have had the most careful and scientific attention medically and dentally with the gratifying result that they all have reached the age when the permanent teeth appear without any dental caries.

The information acquired from the case histories of the children may be of great value in the rearing of other children with healthy mouths and the California dentists can be depended upon to give it a thorough try.

The dental attention given the Quints has had no effect upon the normalcy of eruption of the permanent teeth of some of the children. The models show that some of them may require orthodontic attention.

The Winnipeg dental profession are pleased to welcome Major N. S. Bailey back to duty with the Air Force branch of the Dental Corps. Major Bailey replaces Major Steele who has been transferred to the Victoria B.C. Air Command. Major Steele made many friends in Manitoba who are sorry to see him leave Winnipeg.

ONTARIO:

Dental Trades Cut Service in Toronto

The retail dental supply dealers in Toronto recently have decided to make only one delivery each day instead of two or more. It is understood this was done to comply with the Oil Controller's request to conserve gasoline by avoiding unnecessary deliveries. Dentists accustomed to frequent delivery service no doubt will be inconvenienced to some extent, yet will be quite willing to co-operate. One wonders, however, if it would not be possible to give delivery twice a day if the dealers were

to pool their deliveries. If this were done two delivery trucks would be needed instead of eight and better service would result and a further saving of gasoline.

Owen Sound

The fourth annual meeting of the Grey-Bruce-Dufferin Dental Society was held in Owen Sound on June 18, 1941. Forty-five dentists and dental trade representatives were present to enjoy rod-fishing, trolling and golf.

The banquet and business meeting were held in the evening, at the Owen Sound Golf and Country Club. Dr. G. A. Campbell, Dr. Ed. Grant, Dr. Don Gullett and President Alec Campbell were the speakers at the meeting.

Dr. Wm. McIntosh of Toronto headed the golf winners and Dr. Chas. Williams of Toronto carried away the Bebee cup for the best trout catch.

The following were elected to office for the coming year:

Past President — Dr. Alec Campbell (Warton).

President — Dr. Wilson Bedell (Owen Sound).

Vice President — Dr. Harry Zinn (Shelbourne).

Sec. Treas. — Dr. Wm. Tackaberry (Owen Sound).

E. W. SADLER, *Secretary Treasurer.*

Mr. D. L. Lawrie with L. D. Caulk Co.

Genial Don Lawrie, formerly secretary-treasurer of the Dominion Dental Company of Toronto and present secretary of the Canadian Dental Manufacturers and Trades Association has resigned his position with Dominion Dental to become an executive with the L. D. Caulk Co. Mr. Lawrie assumes the duties of Mr. R. O. Bailey, Managing Director of the company for Canada, who is ill. Don will be missed in his former association with Mr. Alexander.

Name Omitted

In reporting the members of the Board of Governors of the Ontario Dental Association the name of Dr. F. L. Williamson, of Hamilton, was omitted. Apologies, Fred,

Dr. W. B. Amy, Host

On August 13 Dr. H. B. Anderson of Pittsburg was in Toronto visiting Dr. Amy. Dr. Amy arranged to entertain a group of 20 Toronto dentists to meet Dr. Anderson and see his technique for developing full denture impressions by using a special wax.

NOVA SCOTIA:

Convention

The 51st Annual Convention of the Nova Scotia Dental Association was held at the Dental Department of Dalhousie University, Halifax, July 28-29. Some 64 dentists from various points were registered and a very enthusiastic meeting resulted.

The following officers were elected:—

President, Dr. J. H. Rice, Halifax.

Senior Vice-president, Dr. N. G. Layton, Truro.

Junior Vice-president, Dr. L. G. Israel, Sydney.

Secretary, Dr. J. S. Bagnall, Halifax.

Executive Committee, Dr. J. W. Dobson, Halifax, and the officers.

Dominion Dental Council Delegate, Dr. W. C. Oxner, Halifax.

Provincial Dental Board: President, Dr. W. H. H. Beckwith, Halifax; Vice-president, Dr. F. G. Ritchie, Halifax; Dr. W. C. Oxner and Dr. G. M. Dewis, Halifax; Dr. V. C. Calkin, New Glasgow; Dr. M. E. Morrison,

Antigonish; Dr. G. B. Richmond, Sydney.—*Halifax Herald*.

BRITISH COLUMBIA:

THE ATTORNEY-GENERAL FOR BRITISH COLUMBIA

on the relation of
THE COLLEGE OF DENTAL SURGEONS
OF BRITISH COLUMBIA

V.
DAVID COWEN and NEWS PUBLISHING
COMPANY LIMITED.

This case came on for hearing in the Supreme Court of Canada on Monday, March 31st, last, and argument was concluded the same day. Judgment was reserved.

When judgment was finally handed down the appeal was unanimously dismissed thus sustaining the amendment passed by the Legislature of British Columbia as hereunder:—

"No person not registered under this Act shall, within the Province, directly or indirectly offer to practise, or hold himself out as being qualified or entitled to practise, the profession of dentistry either within the Province or elsewhere, and no person shall, within the Province, directly or indirectly, hold out or represent any other person not registered under this Act as practising or as qualified or entitled or willing to practise the profession of dentistry in the Province or elsewhere, or circulate or make public anything designed or tending to induce the public to engage or employ as a dentist any person not registered under this Act."

EMPIRE NEWS

GREAT BRITAIN:

A Splendid Example

As a result of the recent concentrated air attacks on Plymouth no less than twenty dentists had their premises so seriously damaged as to render them unfit for use, but the arrangements made by the local Practice Protection Committee to meet such a contingency were so complete that every practitioner who had been bombed out was provided with alternative surgery accommodation during the following day. That this was possible speaks volumes for the efficiency of the honorary officials of the Committee and the spirit of co-operation which exists within the ranks of the

profession in the area.—*Br. D. Journal, July, 1941.*

Royal College of Surgeons Museum

It is gratifying to be able to report that fuller knowledge makes it possible to state that the destruction to the contents has not been quite so heavy as it was thought to be. Many of the books had been sent away before the raid, as also the greatest treasures of the Library, even before the actual outbreak of the War. Many of the Hunterian Specimens are safe and also the Gibraltar fossil Cranium. The whole of the Odontological collection has escaped although the room is open to the sky.—*The Dental Record, July, 1941.*

GENERAL NEWS

Dental and Medical Courses Merged

Merging of the first two years of the medical and dental schools of the University of Louisville was announced by President Raymond A. Kent on the 105th anniversary of the founding of the University. To complete the consolidation of these courses the erection of a new \$125,000 dental addition to the medical building is necessary and a \$40,000 dental clinic must be set up at the City Hospital. In the explaining of the proposed changes Dean J. T. O'Rourke of the dental school said, "The time has come when it is essential that the practising dentist should have a greater knowledge of clinical medicine." He also spoke of the "startling no man's land" that exists between dental and medical teaching, although Nature does not recognize any great separation of dental and medical service.

Specific steps in the consolidation will include:

1. Admission requirements for the dental and medical schools will be equal.

2. The first two years of the dental and medical courses will be the same and can be counted toward either a dental or medical degree.

3. The dental student will, like the medical student, have opportunities in the third and fourth years for training in diagnosis and in clinical medicine.

4. Two additional years of study will entitle a dental graduate to a medical degree, and the graduate of medicine may in the same length of time obtain a dental degree.—*Oral Hygiene*, July, 1941.

Chicago's Dental Relief Program

The Chicago Dental Society confers regularly every month with the Director of Medical Service of the City Relief Administration so that the entire program proceeds with the co-operation of organized dentistry.

Over fourteen thousand relief clients have been examined at the Dental Unit. Of these, 951 were examinations to "re-check" the service already rendered and of the remaining 13,193, patients were referred to dentists for treatment in 12,068 instances. It was found that in 236 of the examinations no treatment was required, while in 30 cases the patients refused

extractions unless dentures could be provided. The services rendered were chiefly fillings, extractions, prophylaxis and other varied forms of dental service.

As of February 1, 1941, there were 1,472 dentists on the official list of the Chicago Relief Administration. 93 percent of these were called upon for service during the year. Patients are assigned to a dentist in their neighbourhood on a rotation basis only if the dentist of their choice is not on the official list.

During the fiscal year ending March 31, 1941, the total amount of obligations to dentists incurred by the Relief Administration was \$107,385. Of this amount, 47 percent was for fillings, approximately 25 percent for extractions; prophylaxis claimed 13½ percent while 5.9 percent of the total was for full dentures, and 4 percent for denture repairs.

An interesting development of the dental program has been the shift in the age group of relief clients referred for care. In August, 1940, only 1 percent was under 20 years of age. By December, 1940, 22 percent of patients were less than twenty.—*The Fin'ly Review*, Chicago Dental Society, (June 2), 1941.

Ohio Amends Dental Law

Several amendments to the Ohio dental practice act were approved by the Governor on May 21. One of the major changes made is the insertion of a phrase which states that the construction, repair, reproduction, etc., of prosthetic appliances except upon the order or prescription of a licensed dentist, constitutes the practice of dentistry. The section also prohibits the advertisement of services in the construction or repair of prosthetic appliances to anyone except licensed dentists. — *A.D.A. Release*.

Casting of Platinum

An accepted technique for the casting of platinum which promises wide use in dentistry was disclosed by E. R. Granger, D.D.S., F.A.C.D., of Mt. Vernon, New York, at the Pacific Coast Dental Conference, Portland, Oregon, in July.

For many years, platinum and also its sister metal, palladium, have been extensively used

alloyed with gold for all types of bridgework, as well as for crowns, inlays and many other types of dental restorations.

Dr. Granger's new technique, however, permits the casting of pure platinum and of iridium platinum to extremely accurate dimensions.

The great advantage to dentistry in casting platinum to dimensional accuracy is that the higher strength porcelains may now be baked to the metallic parts of restorations, such as bridge frames, thus concealing the metal and contributing to a more aesthetic appearance.

The cast platinum structure is reported to provide better adhesion for the porcelain, while the white colour of the platinum does not taint the translucence of the porcelain. Other white metals are not suitable for this use since they tend to discolour at the temperatures necessary in baking the porcelain.

Precious metals of the platinum group are by-products of Canada's nickel industry and the comparatively recent development of the processes used has made the Dominion the world's leading producer as well as assuring the continuous availability of supplies on this continent.

Scholarships in School of Dentistry

As an experiment, the Board of Regents of the University of Michigan, are offering this year ten scholarships to the School of Dentistry of the University consisting of tuition for the first year only. Previous to this year there have never been any scholarships save awards of tuition to two members of the senior class.

It is to be hoped that Michigan will find it possible to continue and enlarge upon this splendid scholarship idea. This is one fine way of drawing into the dental profession young men with brilliant minds who may not have the financial backing to prepare them for a professional career.

Dentistry as a Professional Career

The Council of Dental Education of the American Dental Association has published a brochure for the use of guidance officers and prospective students. It has been produced for the sole purpose of helping parents, youth, and guidance officers to appraise the field of dentistry and the opportunities it offers for a happy and fruitful career.

It points out that young men and women with good health, with proven scholastic ability, with a genuine bent toward scientific endeavour and with the desire to serve humanity in a career which promises reasonable material rewards and great professional satisfaction, need not hesitate to study dentistry. It states that dentistry does not offer a soft or easy way to carve out a career but rather it calls for rugged health, sound education, deft fingers, long hard hours and life-long devotion to a cause. That the durable satisfactions of life are to be found in it is evidenced by the thousands who have made their way in it in the past and who have won the confidence and appreciation of their fellow men.

The survey on the history of dentistry, present dental education in the United States and Canada, predental training, curriculum requirements, types of practice costs and rewards is most interesting and instructive.

Dentistry Wins Another Battle

By a recent ruling of the Milwaukee City Service Commission, municipal employees who are absent on sick leave for more than three days must now submit a certificate from either their physician or dentist.—*Oral Hygiene*, August, 1941.

Aid for Great Britain and China

It has just been announced that the United States Section of the International College of Dentists has decided to sponsor a movement to aid the dentists of Great Britain and China.—*Oral Hygiene*, August, 1941.

Pan American Day at Houston

At the 83rd Annual Meeting of the American Dental Association which is being held at Houston, Texas, October 27-31 inclusive, a special day has been set aside to honour our Latin American colleagues. Present world conditions suggest the desirability of closer hemispheric relations and we believe that many of our colleagues in Canada will wish to be in attendance. A special luncheon is planned at the Rice Hotel in the Pan American room on Tuesday, October 28.

Scientific table clinics and exhibits are solicited and those wishing to contribute

should write directly to Dr. Lon W. Morrey, 212 East Superior Street, Chicago, Illinois.

We wish to give special attention to the accommodation of our foreign guests and it is suggested that hotel reservations be made immediately by air mail through Miss Charlotte Becraft, 344 Rice Hotel, Houston, Texas.

DANIEL F. LYNCH, *Chairman,*
Pan American Committee.

Bills Barring Professions to Aliens Vetoed

Governor Dwight Green tonight vetoed all of the Dale bills which would have prohibited aliens from practising medicine, dentistry, law and nine other professions and trades in Illinois. The governor had the following to say in part:

"In more than half the world, the forces of oppression and totalitarianism are at war to destroy the principles of free democracy. This nation still stands forth as the one in which the rights of the individual to sustain himself by his own efforts are guaranteed. I do not believe that this is the time at which to weaken, or withdraw, that guaranty of freedom and opportunity.

"Many unfortunate but meritorious people have been driven from their homes and places of employment to seek such freedom as is granted under our constitutional form of government. Many of them are persons of high professional attainment. There is little likelihood that any of them would become a charge upon the state.

"Neither is there a probability that they would not welcome the opportunity, as soon as it was legally available to become naturalized citizens of the country in which they have sought the right of liberty.

"A great many American born men and women who stand highest in our professional and business life, are directly descended from those of alien birth who similarly sought liberty and safety in this country generations ago. Had our states, or national government, denied freedom of opportunity to them, this nation would have been deprived of many of its worthiest citizens of today.

"It is in a time such as this that medical and personal relations should be conducted upon the most liberal interpretation of liberty."—*Chicago Tribune*: 6-29-41; *per A.D.A. Release*.

Laboratory Advertising Bill Held Constitutional

In a decision rendered on June 13, 1941, the Illinois Supreme Court upheld the constitutionality of the 1939 amendment to the Illinois Dental Practice Act which prohibits dental laboratories from advertising the sale of dentures and dental appliances directly to the public.

In its decision the court upheld the right of the legislature to regulate the practice of dentistry because of the intimate relation to public health and welfare, after affirming its previous opinion authorizing the restriction of advertising by dentists.—*A.D.A. Release*.

IN MEMORIAM

Thomas Wilson Stoddart, of St. Vital, Manitoba, died July 28. He retired from practice ten years ago. During the first Great War he served as Captain in the Dental Corps.

Dr. Stoddart is survived by his widow, a son now serving in the R.C.A.F., and a daughter.

William A. Brethour, of Toronto, Ontario, died August 11, 1941. He was graduated

from the School of Dentistry, Royal College of Dental Surgeons in 1895. He was born at Belleville in 1872, the son of a Methodist minister, Rev. D. L. Brethour. On graduation Dr. Brethour began practice in Brantford, Ontario, moving to Toronto in 1908 where he continued until his retirement in 1939.

His wife predeceased him a year ago and he has no survivors.

. . . SECTION FRANÇAISE . . .

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Les Dentistes de Demain

(Conférence donnée par le docteur Alcide Thibaudeau, Montréal,
le 7 juin 1941, devant les membres du Congrès de Québec.)

Monsieur le Président,

Mes chers confrères,

On m'a donné pour sujet de conférence: "*LES DENTISTES DE DEMAIN*". Epineuse question, vous l'admettez, en songeant que pour l'étudier sérieusement, il faut une analyse critique du passé et, difficulté plus grande, il faut dresser un tableau des réformes à accomplir.

Je vous surprendrai peut-être en vous disant que la majeure partie de mon travail, malgré ce qu'annonce le titre, portera sur le passé. Pour bien savoir ce que devrait être le dentiste de demain, il importe de se rendre compte des erreurs du passé. Alors, les réformes se présentent d'elles-mêmes à notre esprit. Les maux dont nous souffrons aujourd'hui ont des causes plus profondes qu'on ne l'imagine. Il se fait, de nos jours, beaucoup d'agitation de surface et personne n'ose aller au fond du problème, de peur de se blesser soi-même. Les déficiences de programme et beaucoup d'autres détails qui font le sujet de critiques trop superficiels ne sont que des causes secondaires, peut-être même seulement des effets que, sans doute, il ne faut pas négliger, mais qui, tout de même, ne doivent pas obstruer la claire vue des véritables sources de nos maux.

Aussi, vous n'attendez pas de moi, je l'espère, l'énoncé d'un programme scolaire ou universitaire, avec son horaire. Limité à une demi-heure, je me verrai forcément contraint de m'en tenir aux grandes lignes. Regardons d'abord ce qui se passe aux Etats-Unis, pour revenir ensuite chez nous examiner les réformes demandées de part et d'autre.

On vient de fêter au Canada comme aux Etats-Unis le centième anniversaire de la fondation de la première école dentaire d'Amérique. Partout, on en a profité pour proclamer, avec un légitime orgueil, les progrès accomplis et les services rendus par notre profession. Certes, oui, et partout il y a eu d'immenses progrès, même chez nous; il serait injuste et maladroît de ne pas l'admettre. Ce que nous voyons présentement, ici, au Congrès de Québec, ne le prouve-t-il pas amplement? Mais cela n'est pas survenu tout seul. Il a fallu vaincre d'aveugles et d'égoïstes résistances comme l'affirme Leroy MINER de Boston:

"It was sometimes rough and stormy, but the path
led always forward, in spite of shortsighted opposition".

Mais après l'enthousiasme général, vient le temps de l'examen sérieux et des constatations réalistes. Il s'est alors trouvé un bon nombre d'hommes de valeur pour constater que nous avons fait de grands pas, mais que nous restions loin du but, parce que nous étions partiellement engagés dans une fausse voie. Voilà qui est bien troublant et mérite une attention immédiate.

Qu'est-ce donc qu'on reproche à la dentisterie chez nos voisins, les Américains? Comme j'estime assez lourde la responsabilité de juger notre passé, je laisse le Dr. Leroy MINER, doyen du Collège de Dentisterie de l'Université de Harvard, le soin de rendre un verdict sur les dentistes américains. (Notons immédiatement que la Faculté de Chirurgie dentaire à Harvard fait désormais partie de la Faculté de Médecine. Dépouillée de son identité, elle est fusionnée avec la Faculté de Médecine.)

Le Dr. MINER constate, dès le début, que les premiers soixante et quinze ans de notre existence furent consacrés au seul développement du côté matériel et technique de notre profession, et qu'ainsi l'enseignement tendait surtout à développer l'adresse manuelle. A cela, il n'y a rien d'extraordinaire, il faut un commencement à tout. Mais MINER ajoute que, depuis 1910, GOADBY, HUNTER et d'autres bouleversèrent les conceptions des praticiens, en leur faisant voir que l'état pathologique ou physiologique de la bouche avait des relations très étroites avec l'état général ou l'incapacité physique et qu'il fallait se rapprocher de plus en plus de la médecine. Il n'en resta pas là et, pour des motifs financiers, il permit la fusion de sa Faculté, en septembre 1941, avec la Faculté de Médecine de l'Université de Harvard. A l'avenir l'étudiant y poursuivra trois années et demie d'études médicales et une année et demie d'études dentaires.

On ne peut douter de la sincérité de ceux qui ont accompli un tel remaniement, mais il reste étrange que, pour corriger les défauts d'une profession, on n'ait rien trouvé de mieux que de la supprimer, imitant ainsi la servante zélée qui incendie la maison pour tuer les punaises dans les lits.

Au mois de septembre dernier, à la Convention de "l'American College of Dentists" à Cleveland, il y eut une réunion pour discuter des "tendances dans l'éducation dentaire". Six orateurs ont traité le sujet. En lisant leurs discours, le lecteur a l'impression que s'ils voulaient tous une étude approfondie du problème, ils ne devaient pas moins nourrir l'arrière-pensée d'ennuyer M. MINER, médecin-dentiste. Ils le firent parler le premier, dans l'espérance, je présume, de connaître les raisons de son coup d'Etat. Dans son discours il manqua de précision et ne trouva d'autres reproches à adresser à la profession que ceux déjà énoncés plus haut.

Mais le Dr. GIES, un des conférenciers, releva, pour les détruire l'une après l'autre, toutes les extravagantes prétentions que l'université de Harvard fit miroiter aux yeux de philanthropes en vue de recueillir l'importante somme de \$3,400,000 dollars. J'en résume cinq:

1.—D'abord, les services dentaires ne sont que restaurateurs. Tous en ont besoin et seulement 20% de la population est en mesure d'en acquitter le coût.

2.—On peut rendre ces services moins coûteux, en trouvant les moyens de prévention et les causes des maladies dentaires.

3.—Les Facultés dentaires manquent totalement des connaissances médicales qu'elles devraient communiquer aux futurs dentistes pour leur permettre la recherche fructueuse de ces causes et moyens.

4.—Avec le plan de Harvard, c'est-à-dire 3½ ans de médecine et 1½ année de dentisterie, "les nouveaux diplômés découvriront rapidement les causes de toutes les maladies dentaires et, en même temps, les moyens sûrs et efficaces de les prévenir".

5.—Ainsi, les services dentaires devenus uniquement préventifs seront accessibles à tous, en raison de leur prix modique. Ils deviendront ainsi surtout des services consultatifs que l'on pourra disséminer par radiophonie.

Cette propagande trop prometteuse n'a rapporté que \$1,300,000. à la Faculté de Médecine de Harvard.

MM. Banzhaf, Horner, Wright, Midgley et Gies, tous des autorités, ont réfuté ces prétentions, en y adjoutant de fines pointes d'ironie.

M. Gies s'est dit ému devant un si bel idéal capable d'assurer le bien-être de l'humanité par la prévention complète et peu coûteuse de toutes les maladies dentaires, de l'enfance à la vieillesse. Mais il a demandé à M. MINER d'expliquer comment un 7/8 de médecine plus 1/8 de dentisterie pourrait assurer l'universelle prévention de tant de maladies dentaires, quand les cours complets de médecine sont restés bredouilles dans leur espérance de découvrir les causes et la prévention de toutes sortes de désordres métaboliques infectieux ou autres, qui, encore aujourd'hui, déconcertent nos meilleurs chercheurs. Prenons par exemple, les maladies des yeux. L'on compte plus que jamais des aveugles ou des porteurs de verres. Pourtant, les ophtalmologistes portent un titre complet de docteur en médecine avec, en plus, le titre de docteur en ophtalmologie. Pour quelle raison n'ont-ils pas réussi dans leur domaine à enrayer toutes les causes des maux qu'ils traitent? Comment prétendre sérieusement qu'un sous-gradué en médecine additionné d'un sous-gradué en dentisterie accomplira les merveilles promises? Non non, on oublie trop facilement que ces faillites sont, comme le dit le Dr. Gies, "dues à des difficultés que les efforts les plus compétents, les plus dévoués et les plus ingénieux n'ont pu surmonter". Nous verrons dans l'instant à quels résultats très probables conduira cette expérience pourtant peu nouvelle. M. Gies, esprit critique averti, nous éclaire sur ce sujet. Il a étudié le rapport 1935 de l'Université de Harvard, dans lequel le président se plaint des immenses besoins de l'école dentaire. Il a lu un commentaire de ce rapport, par M. le doyen MINER qui, au chapitre du nouveau-plan, disait: "Si ces plans sont menés à bonne fin et si l'on peut procurer des finances adéquates à l'école dentaire, l'Université sera soulagée d'un de ses plus grands fardeaux des temps présents".

Et M. Gies a ajouté:

"Ce grand soulagement, n'est-ce pas ce qui fut le plus impérieux motif de votre nouveau plan?"

Les docteurs Horner, Midgley, Wright, Gies et Banzhaf sont évidemment d'accord pour admettre que le bagage médical des chirurgiens dentistes doit être augmenté,

mais ils ne déclarent point que 3½ années de science médicale pure, suivies d'une année et demie d'études de science et de pratique dentaires peuvent nous donner des compétences.

Et, pour nous de Québec, si nous voulons sincèrement réaliser des progrès et reprendre le temps perdu, nous suffira-t-il de jeter un coup d'oeil au-delà de la frontière américaine et d'y examiner les reproches que se font nos voisins? Ne faudra-t-il pas aussi avoir le courage et la loyauté de constater nos propres carences?

Il y aura 50 ans demain que fut fondée, à Montréal, la première école dentaire de la province. C'est une erreur de croire, que, pour cela, le dentiste canadien doive toujours être 50 ans en arrière des autres, comme le fils né 25 ans après son père aura toujours 25 ans de moins. La dentisterie n'est pas née chez nous et tout n'était pas à inventer pour nous. Cette science est apparue sur notre sol avec un héritage scientifique déjà vieux de 50 ans. Tout n'était donc pas à créer. Le fond existait. Il fallait l'exploiter, le faire progresser.

Loin de moi l'idée de croire que si nous n'avons pas suivi la marche ascendante et rapide de nos voisins, toute la faute en retombe sur nos prédécesseurs. Il se trouvait sur leur route des difficultés bien particulières. Nos institutions ne disposaient pas de grandes ressources financières. De plus, le fait d'être de langue française dans un Amérique anglophone constituait pour nous un des obstacles les plus sérieux à surmonter.

Mais cela suffit-il à tout expliquer et à nous justifier de nous endormir dans la douce quiétude des gens perpétuellement en retard? Non! Nous avons commis de graves erreurs, il faut le confesser pour mieux en mériter le pardon. Nous n'avons pas su profiter de notre système d'éducation classique alors inférieur à nul autre. Notre cours classique tant méprisé par quelques-uns, Sir Robert FAULKNER l'a qualifié, un jour, de "supérieur" devant les représentants réunis de toutes les universités canadiennes. Par une loi provinciale fort regrettable, nous avons commis la paradoxale erreur d'ouvrir toutes grandes les portes de la profession, pour y laisser entrer n'importe qui. Une foule de jeunes gens, pour la plupart intelligents sans doute, mais sans expérience, se laissèrent éblouir par cette facilité d'admission dans une profession respectable et surtout réputée lucrative. Les plus intelligents s'aperçurent bientôt de l'erreur, regrettèrent de n'avoir pas fini leurs études secondaires et s'efforcèrent de suppléer à leur incomplète formation par des études personnelles. D'autres versèrent dans le mercantilisme et le charlatanisme, au point de devenir des facteurs de découragement pour les dentistes imbus d'éthique professionnelle. Je me rappelle avoir entendu un confrère cultivé s'écrier en pleine séance publique de la Société Dentaire de Montréal: "Il y a dix ans que je m'efforce d'exercer ma profession selon les convenances que m'ont infusées des confrères épris d'idéal; il y a dix ans que des confrères sans scrupules m'enlèvent mes patients par leur mercantilisme. J'ai droit de vivre comme eux. Je ferai comme eux, tant pis pour le peuple qui ne veut pas comprendre".

Voilà, messieurs, des conséquences qui ne découlent pas des programmes universitaires, — tous ont suivi les mêmes cours, — mais d'une formation secondaire insuffisante.

Les choses en vinrent au point qu'un bachelier paraissait gaspiller son titre, s'il se livrait à l'étude de la dentisterie. Certes, il est vrai que dans nos villes et nos campagnes, beaucoup de confrères nous font honneur, mais combien ne le doivent qu'à eux-mêmes. Des luttes intestines ont déchiré notre profession depuis 38 ans, tous le savent. Notre prestige et notre avancement en ont particulièrement souffert.

Du triste état de choses du passé, la première des conséquences désastreuses fut le manque de formation intellectuelle chez un trop grand nombre de nos gradués.

Pourtant, ce n'est pas qu'il eût disette d'intelligences propres à la culture dentaire. On nous fait une infinité de reproches bien ou mal fondés. On s'en prend à l'enseignement. On le dit peu pratique, déficient sur bien des points, insuffisant pour la formation de dentistes au courant de toutes les exigences de la dentisterie moderne, trop technique pour éveiller chez le dentiste le goût de la recherche et de l'analyse scientifiques. En somme, on nous adresse les mêmes reproches que se font les américains, sauf que de ce côté-ci de la frontière, on a oublié de constater que la grande pauvreté de notre université pouvait occuper une place importante dans nos difficultés, tandis que chez les américains on ne s'est peut-être pas assez aperçu que les millions ne remplacent pas la formation des candidats, ni la compétence des professeurs.

A toutes nos carences, on nous propose des remèdes. Quels sont-ils? Ils découlent naturellement de nos maux, voilà pourquoi j'ai quelque peu insisté sur nos erreurs. D'aucuns nous proposent des remèdes révolutionnaires. Pour eux, il faudrait chambarder notre système d'enseignement et changer le personnel enseignant. D'autres, simplement radicaux dans leurs suggestions, suivraient, volontiers, l'exemple de Harvard. D'autres, enfin plus modérés et peut-être plus clairvoyants, croient que de simples modifications, avec beaucoup de collaboration et de bonne volonté, suffiraient à redonner à notre profession autant d'éclat et de culture qu'aucune profession peut humainement en espérer.

N'oublions pas que chez nous, en raison des erreurs passées, il s'écoulera, en dépit des meilleurs remèdes, plusieurs années avant que l'on puisse voir poindre des progrès éclatants. La restauration de notre enseignement universitaire ne peut être qu'une oeuvre de collaboration à laquelle devront participer toutes les meilleures volontés.

Des réformes proposées, examinons, si vous le voulez, celles qui doivent être rejetées d'emblée.

La première est bien celle de Harvard, parce que cette formation incomplète, à la fois médicale et dentaire, ne produira que peu de dentistes de haute valeur. Sous pareille formation, l'étudiant poursuivra incomplètement l'étude d'une profession qu'il n'exercera pas et il étudiera pendant une année et demie seulement la science qu'il exercera toute sa vie. Adieu, le sens artistique, l'habileté manuelle et les connaissances techniques et théoriques de la dentisterie opératoire, de la prothèse partielle ou complète, de la céramique, de l'exodontie, de la radiographie, de l'orthodontie.

Pour être dentiste, sous ce régime, il faudra être à moitié médecin et à moitié dentiste, c'est-à-dire ni bon médecin, ni bon dentiste. Comment pourrait-il en être autrement, si l'on songe que les cours donnés pendant les trois années et demie seront de médecine générale et non de dentisterie? Imaginez alors la difficulté pour l'étudiant d'assimiler dans une année et demie tous les cours théoriques exclusivement dentaires et toute la pratique des laboratoires et de la clinique.

Pour former ce dentiste rêvé, il faudrait lui faire obtenir d'abord son doctorat en médecine après un stage raisonnable comme interne dans un hôpital, pour lui donner quelque expérience en pratique médicale; puis le soumettre à faire au moins deux années, si non trois, d'études dentaires, en vue de lui donner toutes les connaissances nécessaires à la pratique de notre art.

Vous qui avez 15 ou 20 années de pratique, vous savez ce qu'il en coûte pour devenir maître de ses doigts, de ses nerfs et de son jugement. Ne l'oublions pas, pour mériter le titre de bon médecin ou de bon dentiste, ce n'est pas tant par la quantité de leçons et de matières théoriques absorbées à l'Université qu'on y arrive, que par la qualité, la compréhensibilité de ces leçons et l'usage qu'on en fait pour

acquérir l'expérience. A cela, ajoutons l'ardeur au travail, un grand sens d'observation et nous avons les principaux facteurs du progrès scientifique du nouveau praticien.

On aurait tort de chercher la réussite dans le bourrage de crâne intempestif qui laisse le jeune homme dans la confusion, l'embarras, l'indécision, le manque d'assurance quand il ne le pousse pas à l'audace téméraire et parfois criminelle.

Le rôle des facultés est de former des compétences pour améliorer le sort de la société. Elles donnent, en premier lieu, la formation générale pour l'exercice d'une profession. La spécialisation n'est qu'une forme de culture qui présuppose une formation générale sur laquelle se greffe la spécialité, c'est-à-dire une étude poussée sur un sujet particulier, une branche particulière d'une science déterminée. Les spécialistes se produisent eux-mêmes par la continuation de leurs études commencées à l'université.

Connaissance et science ne sont pas synonymes. Il ne faut pas confondre ces termes, car l'un mène à l'autre. Tous les humains ont la connaissance de la foudre, mais bien peu en ont la science. Une connaissance ne devient véritablement une science que par la pratique, mais la pratique ne donnera pas généralement la science d'une connaissance qu'on ne possède pas. Nous admettons volontiers qu'en trois années et demie, on acquiert un certain savoir en médecine; mais le fait de ne pas exercer la médecine réduira bientôt cette science acquise à l'état de connaissance élémentaire. Que dire alors du peu de connaissances assimilées en une année et demie d'étude de la dentisterie? Je craindrais bien qu'elle ne dégénère en une pratique de pure extorsion à force d'être rudimentaire. Qui en souffrira? Le peuple.—Tant pis pour le public! s'écriait le confrère désabusé. Mais le public ce n'est pas lui, le coupable; il n'a été pour rien à la signature du parchemin qui authentique le professionnel.

Dans un document que j'écrivais en 1928 et qui fut remis plus tard aux autorités supérieures de l'Université, je me suis permis de dire: "Le Corps professionnel qui délivre un diplôme à un aspirant qui ne donne pas les preuves de connaissances suffisantes pour honorer une profession, commet une grave injustice envers le Corps professionnel concerné, envers l'Université, envers la race, envers le diplômé lui-même. Ce parchemin pour qui le lira voudra dire: "Vous pouvez vous adresser au porteur de la présente; il est compétent; nous vous garantissons sa science et son honnêteté".—Garantie qui prend un caractère de gravité particulière lorsqu'il s'agit de professionnels qui peuvent compromettre la santé et même la vie de leurs clients, tout en leur prenant injustement leur argent. Comme l'ignorance et l'incompétence ne ferment pas toujours la route du succès, du moins pour un temps, il arrive souvent que ces indésirables, forts de leur diplôme, précieux masque pour leur ignorance, utilisent les talents qu'ils auraient eus pour une carrière purement commerciale, et font à leurs confrères une concurrence déloyale. Ne pouvant par leur savoir et leur honnêteté se constituer une clientèle, ils étalent, sans vergogne, une réclame tapageuse et mensongère et attirent chez eux des victimes que protègent bien peu la loi. De là, une infinité de misères et d'escroqueries qui tendent à faire mésestimer la valeur des services professionnels, faussent l'éducation populaire, éprouvent dangereusement l'honnêteté des meilleurs praticiens, les obligent quelquefois à négliger leur devoir et à quitter la voie de l'idéal, pour courir au pratique, au réalisme, dans le sens moderne du mot. Le succès des charlatans et des imposteurs chez nous, n'est-il pas attribuable aux trop fréquentes déceptions subies par nombre de clients aux mains de ces tristes diplômés? L'expérience de Harvard mènera-t-elle là? Elle a fait faillite à Rochester, il y a vingt ans, malgré les millions dépensés pour sa réussite.

Il faut aussi éviter de verser dans l'exagération. D'aucuns, effrayés par nos lenteurs à progresser, et animés du désir d'éviter de nouveaux écueils, ont élaboré des programmes

qui, à première vue, paraissent quelque peu chargés pour un cours de dentisterie limité à quatre années.

Les sentiments de ces réformateurs sont tels qu'il y a lieu d'espérer qu'une fois certaines appréhensions disparues, ils conviendront de la nécessité d'éviter les exigences excessives qui conduisent fatalement au néfaste bourrage de crâne plutôt qu'à la saine et haute formation.

Sans doute, il ne saurait être question de vouloir réduire l'enseignement universitaire.

Si nous ne souffrons pas trop d'ignorer les conséquences possibles d'une présentation du siège, d'une chute de matrice ou d'une thrombose de la coronaire, il n'en est pas moins vrai que nous pourrions accroître nos connaissances sur la pathologie, la physiologie et la biologie.

Rapprochons-nous de la médecine, sans nous jeter dans son estomac. Collaborons avec la médecine, en apportant dans notre collaboration, une culture qui fasse de nous des hommes de science égaux en valeur aux médecins les plus réputés. Notre collaboration alors se fera sur le même pallier et non à un étage inférieur comme l'aide pour le maçon ou le briqueteur.

Comblons nos lacunes, suivons attentivement les évolutions de la diététique et de l'hygiène.

La question des exigences pour l'immatriculation est réglée: tous nos élèves sont maintenant des bacheliers. Tous n'ont pas pour cela les aptitudes requises pour l'étude de la dentisterie. Il importe donc d'élever le niveau des études de chaque année universitaire, de faire des examens de terme une épreuve qui permette l'élimination, dès la première année, de ceux qui ne seraient pas dans leur vocation. C'est au début et non au terme d'un voyage que le changement d'itinéraire s'offre plus facile. Tous y trouveront avantage: l'étudiant, le public, l'université et la profession. Il faudra de nouveau gagner ses épaulettes. Par quatre ou cinq années d'efforts et de travail, nos étudiants orneraient mieux leur esprit et fortifieraient leur caractère et leur volonté. Ils prendraient des habitudes durables qui feraient d'eux des hommes accomplis vraiment utiles à leurs semblables et à eux-mêmes, tout en jetant du lustre sur leur Alma Mater. Pour être moins révolutionnaire, cet idéal paraît plus classique et plus sûr que celui de vouloir faire de simples techniciens ou des spécialistes de chacun de nos étudiants.

Pour ce qui est de l'enseignement universitaire lui-même, ce serait une erreur de vouloir le rendre trop pratique dans le sens moderne du mot. Chesterton écrivait de l'homme pratique: "Etrange lubie de nos jours de croire à la nécessité d'hommes pratiques lorsque les choses vont mal. L'inverse serait plus juste. Les affaires ne marchent pas, ayez recours au penseur, à l'homme de doctrine qui vous expliquera ce qu'il y a de faussé dans le rouage".

Aux jours les plus sombres, au Portugal, à qui s'adresse-t-on?—A Salazar, un penseur, un professeur, un homme remisé durant nombre d'années. Il n'était pas assez pratique pour qu'on eut recours à ses services avant la catastrophe.—Vous observez ce même phénomène dans tous les pays acculés à la révolution. Le financier pratique conduit un pays à l'abîme; le penseur, le théoricien, l'en sort.

Si nous avons tous commencé par être de bons théoriciens, on ne nous ferait pas, aujourd'hui, le reproche de n'être pas pratique.

Notre enseignement actuel présente de graves déficiences. Il importe de les corriger. Peut-être serait-il important de savoir qu'il y a une hiérarchie des sciences enseignées. Ne croyez-vous pas qu'il faille rendre notre enseignement plus rationnel? En dentisterie opératoire par exemple ou en prothèse, il faudrait mettre plus

d'insistance sur le pourquoi de chaque mouvement, que sur la manière technique de l'opérer. L'intelligence ainsi éclairée saura mieux guider la main. Avec, en plus, une direction unique donnée à l'enseignement, il deviendra plus facile de coordonner les programmes, de prévenir les chevauchements, et surtout les contradictions. Chaque département devrait avoir un chef responsable au directeur des études et un assistant capable de le remplacer, au cas de nécessité.

Le succès d'une faculté réside principalement dans le choix des professeurs. Ici, nulle place pour les sentiments, les intérêts personnels, la politique ou la vénalité. Le mérite, la culture, la dignité de vie, les aptitudes pour l'enseignement doivent seuls entrer en ligne de compte, quand il s'agit de confier une chaire d'enseignement à un dentiste.

Le docteur Owre, homme d'une haute culture et Doyen à l'Université de Colombia, disait qu'un illettré ne devrait pas être admis dans une profession libérale et jamais toléré dans un corps professoral.

Evidemment, il ne s'agit pas ici du type banal qui ne sait ni lire ni écrire, mais dont le bon sens naturel le guide dans l'accomplissement quotidien des besognes élémentaires de la lutte pour la vie. C'est le type inoffensif et de plus en plus rare. Il s'agit d'une autre catégorie d'illettré, celle du jeune homme qui, après quelques années de High School ou après quelques années de cours classique, ou même après un cours presque complet, se lance dans l'étude d'une profession, perd tout contact avec l'histoire, la littérature et la philosophie, les sciences, et se jette dans la pratique de cette profession dans laquelle il ne voit plus qu'une source de bien-être matériel. Plus d'acquisition véritable dans le domaine scientifique de sa profession, divorce absolu avec l'histoire, la philosophie et la littérature, mais des souvenirs plus nuisibles qu'utiles qui omnibulent son entendement et le rendent lui-même victime de ses propres déficiences qu'il ignore. Toute son attention se portera sur le terre à terre des relations humaines, sur les roueries du monde matériel qui l'entoure et, bientôt, ce sera un des êtres les plus dangereux de la société, surtout s'il est intelligent. Car l'intelligence naturelle ainsi dépouillée de toute spéculation de l'esprit ressemble étrangement à une locomotive mise sous vapeur et lancée sur une voie inachevée. Quand, au bout des travaux, libérée de ses rails, elle s'élancera, débarrassée de toute contrainte, de toute directive, elle ne restera pas longtemps sur les hauteurs. Elle suivra les accidents naturels du terrain pour s'engager sur les pentes. Une fois la descente commencée, elle deviendra vertigineuse vers les bas-fonds emportant avec elle dans son désastre tous ceux à sa remorque. Et pour mieux confirmer cette opinion, écoutez maintenant celle du grand Cardinal Newman:

"Le meilleur auxiliaire de l'étude professionnelle et scientifique est la culture générale de l'esprit. Les hommes instruits ont une compétence inconnue des illettrés et l'homme qui a appris à penser, à raisonner, à comparer, à discerner et à analyser, qui a raffiné ses goûts, formé son jugement, aiguisé ses facultés mentales, sera dans un état d'esprit qui lui permettra d'aborder n'importe quelles des sciences ou fonctions avec une facilité, une aisance, une versatilité et un succès qu'aucun autre ne pourrait posséder ou envier."

Vous avez là le secret qui fait une profession forte, rayonnante, admirable: la culture. C'est ce vers quoi tout dentiste et tout étudiant doivent diriger leurs efforts persévérants.

Gingivo-Arthritites Dentaires et Avitaminoses

par M. DECHAUME

(suite)

3.—A. . . , 8 ans, nous est envoyé le 11 mai 1936, par le Dr Izard, pour une hypertrophie gingivale diffuse, qui empêche tout traitement orthodontique.

Ce qui frappe chez cet enfant, en dehors des troubles de l'articulé, c'est, en effet, l'existence d'une hypertrophie gingivale diffuse, qui, en certains points recouvre presque la moitié de la couronne des dents (fig. 2).



Fig. 2

Cette hypertrophie est légèrement rosée. Elle ne s'accompagne pas d'adénopathie.

A l'interrogatoire la personne qui accompagne l'enfant nous donne les renseignements suivants:

1ère L'enfant, bien qu'élevé à la campagne s'est toujours assez mal développé.

2ème Du point de vue gingival, les troubles actuels se sont beaucoup atténués depuis que l'enfant est à Paris où il vient d'être opéré de végétations.

3ème Ces troubles semblent en rapport avec une alimentation défectueuse. Il a pris des biberons jusqu'à 5 ou 6 ans. Depuis, son alimentation consiste presque exclusivement en purée de pommes de terre, pâtes alimentaires; des carottes et des salades une fois par semaine seulement environ; pas de choux; peu de fruits.

4ème Lorsque l'enfant vient à Paris, on lui donne un régime alimentaire plus varié, ce qui entraîne rapidement une amélioration manifeste de l'état gingival.

Nous demandons un examen de sang qui donne:

Globules rouges	4,200,000
— blancs	11,800
Polynucléaires neutrophiles	72.5 %
— basophiles	0.5 %
— eosinophiles	1 %
Grands mononucléaires	2 %
Moyens —	20 %
Lymphocytes	4 %
Temps de saignement	3 minutes
— coagulation	9 minutes

Nous conseillons de surveiller le régime et prescrivons de l'acide ascorbique.

Nous revoyons l'enfant le 16 mai, très amélioré.

Nous sommes sans nouvelles depuis.

4.—Mme L. . . , 37 ans, nous est adressée le 23 octobre 1936, par le Dr Giroud, pour une gingivo-stomatite persistante et des caries dentaires que son dentiste n'arrive pas à traiter définitivement.

Elle vit à la campagne. Mariée, sans enfant, elle a fait, alors qu'elle avait 25 ans, une fausse couche accidentelle. Aucun antécédent et bonne santé habituelle jusqu'à il y a environ cinq ans.

Depuis cette date elle souffre de l'estomac, et, pour cette raison, elle a été soumise à un régime extrêmement sévère: peu de pain, pas de crudités (ni fruits, ni légumes crus), laitages.

Depuis trois ans toujours pour son estomac, elle a consulté un autre médecin qui a modifié son régime de la façon suivante: pas de viande, pas de fruits crus, peu de légumes et seulement cuits, du laitage et des pâtes.

C'est depuis trois ans également qu'elle souffre des gencives: celles-ci ont augmenté de volume et saignent au moindre contact. De plus les dents se carient plus facilement (caries du collet), si bien que la malade va sans cesse chez son dentiste (il semble plutôt que les obturations tiennent mal, parce que difficiles à faire au contact de ces gencives saignantes).

Elle se plaint également que ses lèvres sont sèches, qu'elle a peu de salive et que ses yeux sont souvent "collés" le matin.

Il y a un an, nouvelle consultation pour son estomac. On lui parle d'hypochlorhydrie et lui donne de l'acide chlorhydrique et le régime suivant:

Pas de laitage, légumes cuits, fruits cuits, quelques jus de fruits (oranges . . .) que la malade ne peut supporter car ils provoquent une sensation de brûlure à la langue.

Lorsque nous la voyons pour la première fois, le 23 octobre 1936, elle paraît en bonne santé, mais: Les yeux sont secs, ils auraient toujours été ainsi et seraient "collés" chaque matin au réveil. Les lèvres sont sèches avec un peu de parlèche aux commissures. La langue est sèche, vernissée, décapillée. La salive est peu abondante, la muqueuse buccale rouge, paraît chaude. Les gencives sont hypertrophiées, congestionnées, saignolantes. La denture n'est pas en trop mauvais état.

Il existe des caries du collet sur les incisives, caries insuffisamment nettoyées. L'incisive centrale inférieure droite présente un granulome qui est traité par la haute fréquence, g¹ est dévitalisée.

Nous demandons au Dr Giroud de bien vouloir l'examiner. Il nous donne les renseignements suivants:

Globules rouges	4,400,000
— blancs	4,600
Temps de saignement	12 minutes

Les dosages de vitamine C donnent 1 mgr. 16 par litre dans le sang—chiffre très bas.

On peut donc conclure à une avitaminose et on commence un traitement par l'acide ascorbique.

Dès les premiers jours de novembre, l'amélioration est manifeste.

Le 1er décembre, les troubles gastriques se sont améliorés, les selles sont régulières ce qui ne s'était pas produit depuis longtemps. Nous conseillons à la malade de suspendre tout régime.

En janvier 1937, elle a engraisé de 8 livres. Elle mange de tout avec appétit et sans douleur. La langue est moins vernissée, les lèvres moins sèches. La malade continue un traitement intermittent avec l'acide ascorbique.

En juillet 1937, il persiste encore un peu de sécheresse des lèvres; on conseille les vitamines A.

En décembre 1937, si l'état des gencives reste amélioré, la malade présente, par contre, des troubles cutanés (état atrophique) qui font rechercher des troubles endocriniens.

5.—D . . . , 26 ans, a toujours joui d'une excellente santé.

Depuis janvier 1933, les gencives ont commencé à se congestionner et se décoller, dans la région incisive inférieure, d'abord.

En 1934, l'hypertrophie gingivale se généralise aux deux maxillaires, et le brossage des dents provoque le saignement des gencives. Puis les hémorragies deviennent spontanées, diurnes et nocturnes. Au réveil les gencives sont couvertes de caillots ou parfois de pus.

En 1935, apparition sur G¹ d'un granulome kystique qui est traité avec succès par la haute fréquence. Les troubles gingivaux subsistent malgré les diverses thérapeutiques conseillées et essayées par de nombreux spécialistes (bleu de méthylène, gonacrine, 914, acide trichloroacétique . . .). Parallèlement l'état général devient médiocre la malade accuse de l'asthénie.

Lorsque nous le voyons pour la première fois le 22 février 1937, il présente une gingivite hypertrophique extrêmement importante puisque les bourrelets gingivaux arrivent à recouvrir presque le 1/3 de la surface coronale. Le moindre contact provoque un suintement sanguin.

Le malade est pâle et se plaint d'asthénie.

L'interrogatoire nous apprend que depuis six ans il suit un régime très déficient en vitamines puisqu'il ne comporte que: potages, viandes grillées, légumes cuits (surtout riz et pommes de terre), confitures, très rarement des fruits.

Nous demandons un examen de sang qui donne:

Globules rouges	4,878,000	
— blancs	8,230	
Polynucléaires neutrophiles	71	%
— eosinophiles	1.4	%
— basophiles	0.4	%
Lymphocytes et petits mononucléaires	8	%
Moyens mononucléaires	6.2	%
Grands —	13	%
Richesse globulaire dosée par méthode de colorimétrie	73	gr.
Hémoglobine calculée en poids	10.2	%
Valeur globulaire	0.74	
Temps de coagulation	9 minutes.	Caillot irrtractile.
— saignement	3 minutes.	

Nous conseillons au malade:

1ère Un régime plus riche en légumes verts et en fruits.

2ème Un traitement général: acide ascorbique et protoxalate de fer, alternés.

3ème Des cautérisations des gencives avec de l'acide trichloroacétique.

Très rapidement (moins d'un mois), le malade put constater une amélioration non seulement des gencives, mais de l'état général.

En décembre 1937, l'état s'est encore amélioré et un nouvel examen sanguin, donne:

Richesse globulaire en hémoglobine:

Méthode colorimétrique	81
Calculée en poids	11 gr. 3
Valeur globulaire	0.86

In Memoriam

Nous avons le regret d'annoncer la mort du docteur Jean Vandal.

Nous prions la famille d'accepter nos plus vives condoléances.



Reconsecration Pledge

AT THIS TIME of peril for my country, in this fight against the evil powers which threaten to engulf the earth, conscious of my duty toward Canada and toward my fellow man, I solemnly pledge before Almighty God that I shall do all that lies within my power, and deem no sacrifice too great, to bring about the victory of our arms, that right may triumph, that justice may prevail and that a righteous peace may reign throughout the world; to this end I reconsecrate myself, with faith, with courage and with the knowledge that, though the path be hard and the day be dark, our efforts can not fail.





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China and the World Today

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TO THE student of world affairs there is much in the background of the present chaotic international situation to suggest that the key to the future is to be sought in the Far East. In consequence, it is of vital importance that the citizens of America and of Europe should seek to understand, more than superficially, the significance of the Sino-Japanese struggle now in progress, and the Eastern-Western relationships which are involved. To reach such an understanding, it is essential that the Westerner hold in abeyance many Occidental attitudes and points of view which have become traditionally accepted and which stand in the way of even partial comprehension of the contemporary world picture. The writer acknowledges many fundamental changes in his own thinking since taking up residence in an alien country, and since coming into close contact with a culture markedly different from his own. Perhaps it is a wholesome thing to look at one's cultural background from a distance of ten thousand miles; it undoubtedly alters, and perhaps sharpens one's intellectual perspective.

It is not easy to understand the East. The writer has used the term 'partial comprehension' with intent. There is no lack of effort, in present-day literature, to convey certain definite impressions of

the Far East to Western readers. Unfortunately, much of this is based upon inadequate acquaintanceship with the areas under discussion, or is influenced by a desire to propagate certain points of view, political, economic or social, rather than to make available objective factual or analytical data. Particularly in this time of political upheaval do we find much prejudiced or superficial opinion presented to bewildered Western readers. As someone has recently wisely remarked—"It is better to keep your mouth shut and be thought a fool than to open it and remove all doubt!" It is, therefore, with due recognition of the complexity of his subject that the writer seeks to present findings gathered from more than fifteen years of residence in the Orient as professor in a Chinese University.

THE AGE OF THEORIZING

A prominent economist has characterized the 19th century as the 'Century of Hope'; the first quarter of the 20th century he has called the period of 'Hope Deferred'. If it is permissible to thus characterize a period, the writer would suggest that the last four decades constitute the "Age of Theorizing". Politically, our theories have swept forward to include new concepts and new applications of Democracy, Internationalism and World Brotherhood. Economically, our

theorists have spoken and written volubly about Equality of Opportunity and Fair Distribution of the earth's resources. Socially, the Western world has reached out to new concepts of racial and class equality. Intellectually we have visualized new realms of Objectivity and new achievements in Adventurous and Untrammelled Thinking. Spiritually, the West has thought in terms of a vital, practical, universal potency in religious life.

Now, in the midst of the most awful period of bloodshed, destruction, brutality, hate and misery of recorded history we may appropriately ask the question as to the validity or the sincerity of our theories; and we should seek, without evasion or false pride, to evaluate our own share of responsibility for the present obvious breakdown of world civilization. Politically, in spite of our advanced thinking, we have little ground for feelings of satisfaction. Our achievements in democracy in the Western World have not been too convincing either to Eastern onlookers or to ourselves. Internationalism remains an attractive theory, as yet quite unrealized; world brotherhood—a mockery in a world in which man is pitted against his fellow in a mutual pact of death and destruction. In the West a Nazi machine seeks, in a sort of savage atavism, to destroy even the opportunity for growth and development in the Western world; and her threatened neighbours, conscious, not only of Germany's perfidy but of their own failure in political achievement, must grimly struggle to retain even the freedom in which to plan for ultimate political growth and accomplishment.

Economically it is equally obvious that the much-discussed ideals of equality of opportunity and of distribution remain in the field of hypothesis. In a world which, thanks to scientific and technological development, grows more food

than the world's population can use, a large percentage of the peoples of the world live appallingly near the subsistence level; while annually an appreciable number fall below it. Planting restrictions imposed upon the farmer, in favoured areas such as America, for the reason that local profits are enhanced thereby, represent surely a fundamentally amoral and asocial outlook which, aside of course from situations arising from transportation exigencies during wartime, is unworthy of any nation today.

Socially, theories of racial and class equality have, with the recent exception of war-torn but gallant England, made pathetically little progress. Petty social distinctions abound in Western countries. Anti-Semitism, though not expressed with the venom, hatred and jealousy shown by Hitler in over-run Europe, is heard daily on the streets and in the drawing-rooms of American citizens who feel pride in their freedom from prejudices and provincialism. One needs only to live in a colonial atmosphere for a time to be oppressed by the illogical, sometimes unconscious, but always damaging feelings of racial superiority which breed resentment and antipathy.

Intellectually, the Western world has, in many fields of thought, unconsciously substituted for objectivity and clear-thinking a process of rationalization in which the desired procedure becomes, by a pernicious alchemy of thought, the right procedure. The frequency of such unhappy sequelae would seem to be due to the fact that objective thinking demands an ingredient of humility which seems to be incompatible with present-day national or individual temper.

Spiritually we must recognize a situation in which so great a discrepancy exists between precept and practice that the keen Easterner, earnestly seeking a spiritual dynamic equal to the demands of today, and profoundly impressed by the

depth and sublimity of our religious concepts, is sorely puzzled, and wonders why we do not try ourselves what we recommend to others.

THE END OF AN ERA

It is becoming increasingly clear that the present world struggle is not merely a simple effort at domination and control on the part of certain predatory and unscrupulous nations; it is not a simple struggle for survival on the part of those peoples menaced by such threats of domination. Any effort to restrict the thinking of the democratic peoples to the problem of immediate survival only would seem to be a perilous disservice to the democratic cause; survival in any real and growing sense necessitates a shrewd comprehension of the philosophic issues—great, world-sweeping issues—which are involved. It has become common practice today to speak of a "new world order", a "new era", etc.; there is growing a realization that it is not enough to defend the old; that the 'status quo' is, in many respects, unworthy of perpetuation. The writer believes that, to an extent unrealized by the majority of people in democratic countries, a new era, sweeping in its significant changes, must be recognized, welcomed and fostered by the democratic peoples; not grudgingly admitted and hesitatingly adopted, but voluntarily chosen. Failing such intelligent acceptance, irresistible elements in this new era might well sweep through the world, causing ultimately even greater chaos than exists today, and retarding immeasurably the achievement of world peace and brotherhood.

We have come to the end of an era. Theorizing is not enough. The Western world is challenged to clarify and to practise its beliefs or to change its terminology.

Let us consider the implications of this

statement politically. It would seem to be clear that we have come to the end of national expansion and control; to the end of exploitation. No longer has any nation the right to think in terms of controlling the destiny of another people. No longer has any nation the right, conferred in the past by military or economic power, to exploit the resources or labour-power of another nation. It would be idle to characterize as right or wrong the concept, firmly held a few centuries ago and until very recently, that it became the glorious privilege for the nation, desirous of territorial or economic expansion, to demonstrate its courage, might and determination by appropriating the territories of, or assuming control of, peoples less aggressively constituted or equipped. Just as there is a maturation of the individual in which he passes from the egocentric stage to that of gregarious adjustment to life with his neighbour, so there may and must develop a maturation of national consciousness in which nationalism, first conceived of as, to use a recent characterization—"concentrated self-interest" becomes transmuted, through development of the finer qualities of heart and mind into a world concept of mutual respect, co-operation and mutual benefit.

For example, probably no one who reads this article would hold the belief that any nation should again be guilty of the exploitation of the Far East such as characterized the relations of China with the Western powers during the nineteenth century. Since approximately 1700 onward, aggressive European nations, whose economy had been transformed by the development and the imperious demands of the Machine, sought raw materials and markets or 'Lebensraum' in systematic territorial expansion or in determined exploitation of raw material resources of less highly organized or less belligerent peoples. Races of different biological

characteristics, such as colour of skin, and of unfamiliar culture were readily stigmatized as barbarian. Priority of possession of the machine, and consequent superiority in warfare and accumulation of wealth led to the development of a white-race superiority complex.

Particularly during the nineteenth century, western exploitation of China took the form of limited territorial appropriation, ruthless economic penetration, demands for treaty ports, special privileges and protections etc., secured, in spite of vigorous protest and obvious reluctance from the dignified, anciently cultured but backward-looking and isolationist Chinese people, by repeated use of force and violence. The history of that period makes humiliating reading for the conscientiously democratic and world-minded western student of today. Gradually, under such bitter tutelage, Confucianist China awakened from her complacent contemplation of her ancient philosophies and her Tang dynasty cultural brilliance to find herself in a world governed by other and harsher standards. Bewildered, she gradually realized that in the modern world eminence in philosophy and the fine arts availed little; military and economic strength seemed to determine political survival. True, she had had periods of conquest and expansion in her own past; but for long years the vast, scattered organism which constituted China and which comprised nearly one-quarter of the human race, covering vast areas devoid of adequate communications, was held together, not through administrative organization or even through community of spoken language, but through a community of culture, and of written language; through a fundamentally democratic group and national structure, and through a tenacious biological vitality. Facing a situation and demands unprecedented in history she set herself to the task of accomplish-

ing in a few decades the adjustment to modern conditions which had consumed as many centuries in the West.

Japan, too was opened up by the aggressive West. At an early period, entertaining ideas of hemispheric conquest, Japan had become astonishingly isolationist for 250 years. Upon the inroads of the irresistible Western nations, Japan accepted the existence of a 'jungle law' of nations; she revived her national concepts of imperial power; and from the Meiji era onwards devoted every ounce of her energy to the acquisition of Western technical, scientific and warlike skill with which to ultimately establish herself as one of the conquering nations. Her people, lovable and industrious, were forcibly moulded into unquestioning but often sorely disturbed pawns in the service of the dominant military factions who planned and prepared and awaited 'Der Tag'.

Thus the boomerang projected by the eager and aggressive Western nations has come back upon them as Japan indicates to a perturbed world that she is now ready to follow the earlier examples of Western nations; now she will form a great empire; now she will establish a new order in Asia; now she and her axis partners will usher in a great new era.

The maturation process in national consciousness, to which I have referred, had not made conspicuous progress around the turn of the century when Japan, in her successful preliminary wars with China and with Russia developed confidence in herself, and in the case of the sequelae of the Japanese-Russian War, developed further distrust of her neighbours. But, in the West, sporadic interest in internationalism developed into earnest thinking and discussion. The catastrophe of the First World War, with its suffering and destruction, sharpened this interest. It rose to great heights in

the postwar period when in hope, in much sincerity and even in prayer the League of Nations was evolved. Then followed the postwar years, with their priceless opportunity of learning that peace can not be legislated, but must be paid for, and with sacrificial payment. This lesson the Western nations did not learn. The most envisioned and inspired political concept of history was given no practical authority by the participating nations and when the first major test came to it, it crumbled. This test came in 1931 when the Japanese struck at Manchuria. The Western nations had warned Japan against imperialistic activities. Japan had retorted that she, too, was an industrialized country; she too, needed raw materials and markets; she too needed food for her people, and 'Lebensraum'. Moreover, Japan wanted a buffer state between herself and her traditional enemy, Russia; she wanted prestige, too and power; she wanted to divert the attention of her youth from internal social-political problems. So, for Japan, 'Der Tag' had come.

The limits of this article do not permit a detailed discussion of the significance of 1931 and succeeding years. An increasing number of historians and observers are coming to the conclusion that in that fateful year the destiny of many succeeding years was settled. Had the Western powers, signatories not only of the Covenant of the League of Nations but also of the Nine-Power Treaty and the Kellogg-Briand Pact, recognized that the invasion of Northern China was not a simple and unimportant Oriental dispute in which, thanks to smallness of financial investment, the West was not crucially concerned—had they realized that this invasion was none else than the first major challenge to all of the growth and maturation of decades, was none other than a 'showdown' as to the supremacy of brute force and bluff over internationalism, world peace and democ-

racy, the history of subsequent years, with its opportunist invasion of Ethiopia by Italy, (successful of course, as have always been mechanized operations against aboriginal peoples), the Spanish War and finally the baleful spread of Hitlerism throughout Europe, would have doubtless been vastly different. But ethical and moral values were overlooked; again the rationalizing process was made to justify non-interference. The Japanese militarists had proven their thesis—brute force was the only potent weapon—the lid was off.

China was again bewildered. With the exploitation of the last century still in mind, she nevertheless had retained a trust and confidence in the written word of the democratic peoples of the West. The breakdown of this confidence, and the impotence of the League when called to action caused China to become not a little 'hard-boiled'. For centuries a democratic people at heart, she had overthrown the tottering Manchu régime, had started out on the incredibly difficult job of rebuilding her nation; and she had counted on the trustworthiness and dependability of the great and vocal democracies.

Disillusioned, she still continued with the process of internal reorganization, knowing that, at any moment, Japan would again strike in the next phase of her "New Order in Asia" policy. One by one, China, under the dynamic leadership of Chiang Kai Shek and his brilliant wife, brought the warlords, relics of postrevolution days, under control. Finally, after years of struggle, the Chinese Communists (to be intelligently distinguished from Russian Communists) promised to sink their differences with the Nationalist Government in a concerted resistance to Japan.

The Japanese militarists viewed with alarm China's growing solidarity which threatened to deprive them of easy conquest in Asia. In 1937 they struck again.

This 'China Incident', they promised their non-comprehending people, would require only from three to six months for completion; then all China would come under their control.

The Chinese were unprepared for total war with a modern, mechanized highly equipped enemy. Nevertheless they fought, and with a courage and skill that has surprised the world. The people thought—"At least, now the western democracies will not ignore our conflict, for we are essentially fighting for democracy and freedom, for them as well as for ourselves." No, the western nations did not now ignore the Sino-Japanese conflict. Their outstanding participation was to eagerly furnish Japan with unlimited quantities of war materials without which that country could not have visited upon China horrors more awful than ever before recorded in history. Without oil and iron from the U.S., nickel, copper, iron etc. from Canada, and other Western contributions the mass murder of untold thousands of defenceless Chinese men, women and children, the raping of Chinese girls and women, the burning and looting of hundreds of thousands of homes would not have been possible. What a paradox that mission contributions from earnest Christians in America should erect efficient missionary hospitals in China; then, when these hospitals are filled to overflowing with suffering civilians and soldiers wounded in defence of their homes, bombs of Western materials, dropped from planes powered by Western oil should smash, with unspeakable outrage, these same hospitals!

Yes, we have come, politically, to the end of an era. The old institutions are outworn. Through disaster and chaos we see that mankind will only grow politically by a recognition that the old values of right and wrong are more potent than political exigency or diplomatic advantage; they are inescapable.

Economically we have come to the end of an era. Reference has been made to the sense of superiority built up in the white races through their prior possession of the machine, and, in many cases, through their proud unwillingness to acquaint themselves with other cultures. The whites have overlooked the fact that the biologist has not been able to establish or confirm such superiority.

The temporary advantage due to the control of the machine with its attendant control of labour and materials is fast disappearing. The Asiatic is becoming familiar with machines; he not only can run them under Western supervision, he can supervise his own industries and is learning to manufacture much of his own machinery. There is a deep economic significance in these developments. A Japanese factory, shipyard, railway, departmental store or subway will be found strikingly similar to Western counterparts. In thousands of tiny Chinese co-operatives scattered over free China, manufacturing, under complete Chinese control, is brought into the hamlet and into the home.

To the observer it is plain that a new economic era is opening. In the future the white man will trade in equality and mutuality of respect with other, hitherto termed 'inferior' races, or he will not trade with them at all. An enlightened East will no longer tolerate the old conditions. The scale of living amongst the Eastern peoples must inevitably rise. Prosperity in America or in Europe can only healthily grow and be maintained upon a policy which admits of, and fosters, a much improved scale of living in other parts of the world.

Socially, a new era is long overdue, and, if future problems of magnitude are to be averted, new social attitudes and relationships must be welcomed and fostered. The snobbishness and exclusiveness of the white races have been

productive of incalculable harm in past relationships. It is not a question merely as to whether or not we ought, ethically and morally, to revise these attitudes, although such compulsions should make revision imperative. Rather, we must face the additional imperative that so-called inferior races are not going to much longer tolerate these unsubstantiated, offensive and destructive evidences of social maladjustment on the part of the white races.

Moreover, in intra-national social relationships it is becoming clear to even the casual observer that invidious class and occupational distinctions must be eliminated. Intra-national racial discrimination, such as the disgusting anti-Semitism which is widely prevalent, and to which reference has been made, must give way to more objective and less emotional and immature thinking.

And finally, in the spiritual realm, which, after all, is all-inclusive, there is a growing restlessness, and a mounting conviction that superficial, theoretical religion, which ascends to vast achievements in hypothesis and idealism with little emphasis on the practical expression of these accomplishments—religion which turns men's thoughts inward in an egoistical introspection and absorption, religion which feels strongly but is afraid to run counter to prevalent public opinion or to face criticism—must yield to a religion which, penetrating deeply into every aspect of human life enables man to seek ultimate values, clear-eyed and unafraid, and having found such eternal values, to stand by them and to exemplify them in individual and national life with such courage and unselfishness and vision as approximates to that of Jesus Christ.

CHINA'S GROWTH IN THE MIDST OF STRUGGLE

After four years of unparalleled bloodshed and war-horror, the Chinese people,

to the astonishment of a not-easily-astonished world, face the future with quiet confidence. Their army is larger, stronger, better-trained, better-equipped and with a higher morale than when the war began. China has lost approximately a tenth of her territory; some fifty million people have been driven from their homes to the Free West in the greatest and most tragic trek of history; the major cities, ports, educational centres etc., of coastal China have been destroyed or occupied; the embryo industrial development of China at the coast has been wiped out. Actual, documented reports of the brutality, the mass murders, the raping of women and girls, the wanton destruction are so awful that, were they not vouched for by observation and photograph they would scarcely be believed.

Yet, in the face of these conditions China has done something virtually unprecedented in history. She has shown that a nation, menaced by a ruthless, better-equipped and better-trained enemy, can not only resist in an "all-out" resistance, but can build and rebuild at the same time. The most significant thing in the whole war picture, in the opinion of the writer, is the capacity of Free China to build, in the Far West, a new nation; to construct lines of communication such as the famed 'Burma Road,' and many others throughout the hinterland; to reorganize industry into the splendidly effective system of small co-operatives, ideally suited to the Chinese economy, until today there are several thousand of these, scattered far and wide throughout Free China, deconcentrated so that air attack cannot possibly wipe them out, and manufacturing small arms and other equipment for the armies as well as civilian needs; to reorganize education and to erect, far in the interior, the colleges and universities which were driven by the Japanese from their original sites;

to attack the problem of mass education and the health of the people with a vigour never shown before, and in close co-operation with mission schools and hospitals. Even in the administration, democratic principles are constantly studied for new applications. Plans are laid for ultimate constitutional and representative government; and a broad, multi-party government is visualized by Chiang Kai Shek in which any group, honest and sincere and with positive creative ideas, may have representation.

The outlook, of course, is extremely complex. China feels that unless the international situation goes against her, she will win out; that if the Western democracies will recognize their essential unity with China in ideal and motive, and will help her with the tools, such as artillery, planes and oil which she so sorely needs, especially in counter-offensive, she will finally succeed if, to use the Generalissimo's words—'it takes four more years, or fourteen'. On the other hand the world situation becomes daily more involved; the Pacific may become a focus of warfare in the near future. Having permitted the hour of prevention to pass, the troubled nations of the world are unable to weigh either the present or the future.

It may seem to the reader that the writer has painted a disturbing and rather harsh picture. This is indeed the case; and the writer has done so because he has a profound confidence in the ability of the democratic peoples to meet these critical situations successfully and intelligently if, and only if, they will throw off the complacency and relative indifference which is characteristic of countries where a high scale of living, comfort, relative security and relative freedom lead to little more than an academic understanding of suffering, poverty and oppression.

We must see clearly the attitude of the

Far East. We must see China as a country devoted to democracy for centuries, and committed to it by the Revolution of Sun Yat Sen in 1911, yet wondering, from the acts and attitudes of Western democracies, whether or not democracy can meet urgent international problems. We must see China as a country which has cut loose from its past philosophically as well as in material ways; which is conscious of a desperate need of spiritual stability, and which is earnestly seeking a spiritual dynamic upon which to build the new China of the future; which finds in the religious contributions of the West a soul-satisfying vision of rich, abundant living, of creative growth and world brotherhood, but which looks in vain for evidences in the West of the ability of religion to actually influence individual and national life. We must recognize in China the paradox of a country in sore need of material and spiritual help, welcoming such help as never before in her history—and yet, not a little 'hard-boiled' and cynical, wondering if, after all, ethical and moral and spiritual values are, in actual practice, unable to cope with brute force, greed and selfishness.

The situation is urgent. China might make peace at any time with Japan, a peace compatible with national honour and self-respect. If she did so, approximately one million seasoned Japanese soldiers would be released—to menace Eastern outposts of the democracies. Chiang Kai Shek realizes that national and immediate interests are not alone to be served; that democracy as a world force depends upon the steadfastness and loyal support of the great Chinese democracy. He asks, in unmistakable terms, for a reciprocal attitude of support on the part of the Western democracies—and that quickly. Another point is, to the student of world affairs, not without significance—If China, feeling her new

strength and the growing solidarity and devotion of her people, has to struggle alone against Japan, or even face additional impediments such as those offered by the democracies from 1937-40 (when they supported the Japanese war machine), her people might feel that, when their sovereignty is again secure, it would be better, in such a world as this, to forsake their traditional ideals of peace and tolerance, and mould a mighty nation, comprising over 400,000,000 people, into a vast military machine suitable for life in a conscienceless world.

CONCLUSIONS

This is indeed a War of Ideas as well as a struggle for existence.

We are competent to meet all demands of the physical war; are we as competent in the War of Ideas? We must recognize the deep world-shaking issues which are at stake today. We must have definite plans for the future, and we must start building, not tomorrow, or when the war closes, but Today. We must convince the world of the honesty, sincerity and wisdom of our plans. We must convince China that we understand and appreciate her position and her ideals. We must show China and the rest of the world that our commitment to democracy is not a hypothetical one. We must demonstrate that, to us, moral values exist; that they must be built into every part of the fabric of international life. We must prove that international agreements, treaties and promises are not temporary tools for immediate advantage; nor are they vague idealistic strivings only.

We can help China; we can help her politically; we can sell or give or loan military assistance; we can easily give relief for her appalling suffering. We can give her spiritual stability, by sharing with her the best that we have and

demonstrating its efficacy in our own lives.

Let us be vocal in our opinions. Let us not shift all of the blame on to our administrators. We have not demanded enough; we have been swayed too often by party interests and allowed great issues to languish. Let us demand more of our leaders; let us show them that when they support those things which are right and unselfish and good, even if not immediately strategic, we shall commend and staunchly support them. Let us make democracy a great, vital, functioning, moral and creative force. Let us not be afraid of criticism as we plunge determinedly into political, economic, social and spiritual problems; let us remember that the most obvious most demonstrative types of loyalty are often unworthy, and that the truly loyal person must often face bitter and superficial attacks from the unthinking.

An awakened Canada, with all its vitality and keen intelligence, would be in a position to give priceless leadership to a sorely stricken world. This awakening could come to the Canadian people through aerial bombardment and mass murder. Surely we must not wait until death-dealing missiles wreak havoc and destruction over Toronto or Montreal or Vancouver. No; this awakening can come through an aroused sensitivity to the 'earthly' fundamental things of life; through a willingness to sacrifice; through a deep consciousness that there are eternal values more important than wealth and comfort—more important than life itself.

The writer earnestly hopes that our great dental profession will play, as it assuredly may, a leading part in directing our people through sacrifice, sympathy and deep conviction to their high destiny in the co-operative building of a new and better world.

The most pleasant things in the world are pleasant thoughts; and the great art of life is to have as many of them as possible.—Montaigne.

Back from the Blitz

by Major I. W. HAMILTON
Canadian Dental Corps

IT IS my privilege this evening to describe to the radio audience of Canada some of my personal experiences during my stay in England under the title of "Back from the Blitz".

It is astonishing how quickly we can adopt foreign words into our vocabulary and attach to them a definite meaning. The word "blitz", for instance, that was unheard of until the present war, is now associated with any action that occurs with lightning speed and it has just as quickly come to have a very definite meaning.

To understand the real significance of this word, one must pass through some stage of this, so-called, "blitzkrieg". Perhaps in no place in the world is this term more aptly illustrated than in London, the centre of world democracy. London has always seemed to me to be unquestionably the world's greatest city, not great in size alone but great in tradition, in culture and in everything that makes for the good of humanity.

London, to every Britisher, is a symbol. It is the centre about which the Empire revolves. It is dignified, gracious and aloof but, at the same time, its hospitality is recognized in all corners of the globe.

Its greatness is due to the industry, integrity and lofty ideals of her people. The Englishman is also known throughout the world for his tenacity. For this reason, the expression, "What we have we'll hold" does not apply to material wealth alone but more to the Englishman's conservative idea of life. Tradition with him is deep-rooted, he is slow to change his ideas but quick to defend and preserve that which he holds dear.

Thus, when we say "London can take it", we really mean that the more the Englishman is knocked about, the stronger

becomes his will to fight back and the slogan "London can take it" becomes, "They will pay for this". So when we hear that London has again been indiscriminately bombed and we associate with this news the fact that buildings and institutions that have stood the test of a thousand years are being crushed and burned to satisfy the German lust for destruction, we also know that the same German will soon be repaid in full. In this connection, it was amusing to read of the recent argument that American munitions are going to Germany. One reply was that they certainly are—plenty of them and the Royal Air Force is delivering them.

It is difficult to realize, unless one has seen it, what the Londoner endures while carrying on during the intermittent rain of death from the skies. To us in Canada, a "blackout" is an experiment and to many just an amusing episode, but picture, if you can, a city with the population of our entire country where every night is a continuous blackout with traffic practically suspended, Piccadilly Circus and Regent St. almost deserted and here and there an avenue roped off where that ugly monster, a time bomb, is awaiting its chance to cause havoc and destruction.

This "blackout" is a decided nuisance that illustrates quite clearly the old adage, "You never miss the water till the well runs dry". One can hardly imagine how annoying it can be. It is not only difficult to get around but it is equally troublesome in your own home. It has a depressing effect because you feel closed in and may develop the ailment known to medical science as "Claustrophobia". I recalled this very vividly on my way home when the lights seemed to radiate hap-

piness and security from the cottages along the St. Lawrence and formed such a contrast with the darkened homes of the Old Country. Little do we, in Canada, appreciate our favourable geographical position at this time.

Participation in an air raid, whether by day or night, is an experience one will never forget. I particularly recall one daylight raid. As we drove up Hyde Park, we saw a squadron of Nazi bombers almost directly overhead. The whine of the bombs and the deafening roar of the anti-aircraft guns created a world of confusion and noise. We left our car standing in some delayed traffic and took a dive into a nearby shelter. Here I got a picture of the real Englishman and learned why his spirit cannot be broken.

I found the people in this shelter quite calm and philosophical although I felt that many of them were without home or occupation, perhaps bereaved of their loved ones—still they were calm and there was no panic or disorder.

Every bomb dropped seemed, literally, to intensify their spirit of revenge and make them more determined. More than one, with a set jaw, muttered the now familiar expression "They'll pay for this". Their spirit was well illustrated by one bus driver who had taken shelter with us. Apparently, a friend of his was manning one of the Ack-Ack guns nearby and as if to give him courage, he shouted "Give 'em 'ell, 'arry."

A description of the Londoner would be incomplete without a few words on the fine civilian organizations. These may be divided into two groups. The first consists of members of the various trades that have been superlatively organized to meet the present emergency. For instance, electricians or gas men are readily available to restore these utilities. Plumbers are quickly on the scene of broken pipes and mains. Fortunately, the water and sewage systems are largely far under-

ground and there is less difficulty with them than one would anticipate but the broken outlets cause considerable work. Even gangs of labourers are ready for clearing débris in order to have business as usual.

The second group consists of voluntary units in which the members are employed at other than their ordinary means of livelihood.

These voluntary services are divided into groups that are responsible for such duties as fire-fighting, supplementary police patrols, ambulance work, etc.

The personnel is drawn from both sexes and many walks of life. These fine fighters carry on their daily duties as far as possible but, in addition, they have become highly trained in their war activities and, like the famed Minutemen of the Revolutionary Period in the United States, they are ready for service in any emergency at any time.

The ordinary citizen also deserves a great deal of credit as he carries on with his occupation. One immediately notices that bus and taxi services are running as usual or with very little interruption; in fact, the taxi drivers are probably busier during a raid than at ordinary times. Railway and tube services continue, shops and restaurants are open and by a dozen such examples one gains the impression that a Britisher does not allow himself to be upset too much by a mere air raid.

As a dentist in civil life, I observed particularly the lot of the civilian dentist in this emergency.

It is not an easy part to play. All physically fit graduates up to forty years of age have been drafted into the forces.

The older men serve the needs of the people as best they can. Patients may have been evacuated, offices may have been damaged or destroyed and dental societies are temporarily disorganized but treatment goes on.

Retired dentists are back in harness

assisting in holding together the practices of the younger men to the best of their ability.

In addition to their professional activities, members of these two groups join one or another of the voluntary units and become fire watchers, policemen, etc. All are possessed of a sincere desire to serve their country and they are certainly doing a job of it.

All of this tells of a spirit that is going to uphold England and the Empire. Wherever a Briton wanders, this spirit and the culture accompanying it go also. Truly, there will always be an England. It makes a fellow proud to be British and a member of the giant family.

There have been many reports of the blitz by returned officers and you have heard many stories of the Canadian troops in England. Since I am a member of the Dental Corps, however, you will perhaps permit me to give you some details of the work of this particular branch of the Service.

The First Divisional Dental Company went over completely equipped and was soon at work in England. Despite the treatment that had been rendered First Division troops in Canada, there remained an almost impossible amount to be done. This situation has never changed. More dental officers arrived overseas but troops continued to arrive also and in such numbers that it has been impossible to reduce the total of operations required.

The treatment rendered is intended to eliminate pain and infection from the mouth and to insure that the soldier can masticate his food. Thus, the Canadian Dental Corps was not organized as a luxury service. It was authorized by hard-headed soldiers with a vision. It is an indispensable necessity because modern warfare makes such heavy demands on the soldier. He must be physically fit and we know from modern studies that proper dental treatment is one of the first essentials.

The reaction of the troops to this service is most gratifying. With the enormous total of operations performed, there is only one instance on record of a soldier refusing treatment. They are becoming more and more dentally minded and it may develop into an important problem for the country and the profession after the war to assist these men to continue to keep dentally fit regardless of their salary bracket.

There is an equally gratifying reaction on the personnel of the Dental Corps itself because there is keen satisfaction always in the realization of service rendered.

There is a message here for the dentists and men who are still to join the Corps. It would be difficult to choose a branch of the service where the result of one's efforts is more apparent and more satisfying to all concerned. Anyone can wear its badges with pride because it is just as great a service to keep a man fit in our forces as it is to put a man out of action in the enemy forces.

The Dental Corps is now larger than it was at the termination of the last war. But still there is a constant requirement for more dental officers and young men of good educational standing because of the tremendous amount of work to be done and the steady increase in the size of the forces.

Participation in the blitz is over for me for the present at least. It was an experience totally different from that of the last war and yet very thrilling for reasons such as described. It is, of course, thrilling also to be back in quiet Canada where life can go on almost as usual. There is one great lesson, however, that is very apparent to one returning at this time. Let us never forget our indebtedness to the Old Country because without this bulwark of defence on the other side of the Atlantic, swift and noisy destruction would quickly upset our present serenity.

A Method of Constructing Water-Cooled Impression Trays for Unusual Cases, and Other Suggestions in Immediate Denture Prosthesis

by WILLIAM W. HURST,* D.D.S., Cleveland, Ohio

FREQUENTLY an immediate denture case will present itself which no stock tray will fit even approximately. (Figs. 1, 2 and 3.) The dentist is confronted with the problem of obtaining an accurate impression with the tray at his disposal which comes the nearest to meeting the necessary requirements. This compromise usually calls for additions of wax or compound to the tray in lengthening the heels, building up the palate and adding to the height of the flanges.

Since these additions of materials add bulk to the tray, tend to displace soft tissue and, in the case of hydrocolloid impressions, act as insulators and interfere with cooling, it readily can be seen

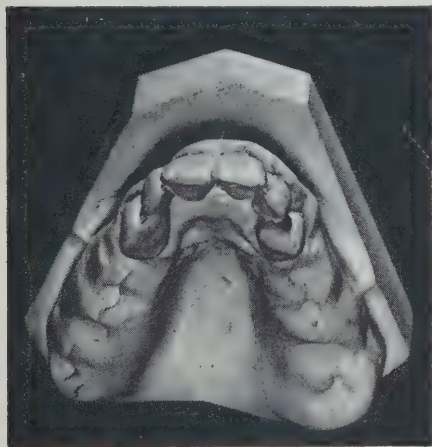


Figure 1

Case showing constricted arch and high vault.

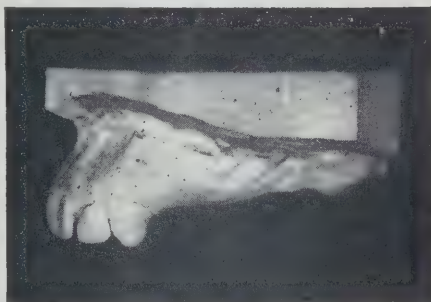


Figure 2

Case showing marked prominence of anterior ridge.

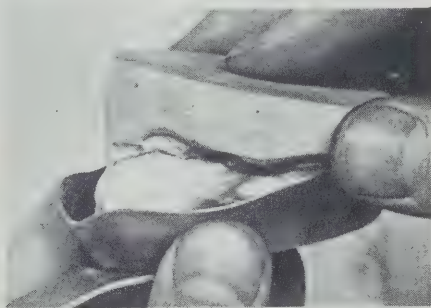


Figure 3

Side view of model showing way an ordinary stock tray would fit case of this type.

that it is with difficulty that even a fair impression is obtained.

The fit of an immediate denture depends so much upon the accuracy of the finished impression that any means to achieve this more easily in the unusual cases is worthy of effort. To construct

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one's own trays for these cases seems the logical answer to this problem. The technique is as follows:

1. An accurate muscle trimmed snap impression is secured and the model poured in plaster or stone.

2. The denture border outline and anterior margin of the postdam area are pencilled on the model. With the point of a knife, a cut is made in the model along the line representing the posterior border.

3. One thickness of base-plate wax is adapted over the model, trimmed to the border outline and anterior margin of the postdam area and luted to the model. (Fig. 4.) Because of the addition of this wax, the finished tray will be slightly larger than the model.



Figure 4

Study model with one thickness of base-plate wax adapted. The postdam area is not covered with wax.

4. By means of hydrocolloidal impression material and a duplicating flask, duplication is made in investment of the model to which the wax is attached.

Removal of the model from the duplicating impression is facilitated by previously making an undercut depression one-eighth inch deep and one-quarter inch in diameter on the under side of the cast. While a wood screw is held in this depression, low-fusing metal is poured into the depression around the

screw, which is then removed and duplication continued. When ready to remove the model, the operator inserts the screw and uses it as a handle.

5. With the fingers, an annealed seamless copper tube, three-thirty-seconds inch outside diameter and one-sixteenth inch inside diameter, is adapted to the investment model. The ends are allowed to project 2 inches ahead of the model. (Fig. 5.)

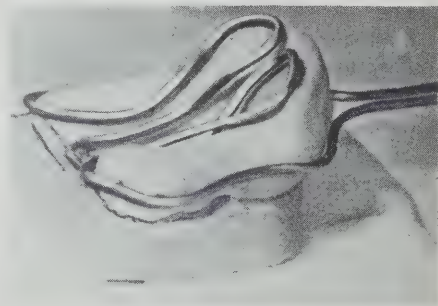


Figure 5

Showing embossed investment model with copper tubing adapted.

6. Two pieces of brass tubing of three-sixteenth inch outside diameter and three-thirty-seconds inch inside diameter are cut approximately 2 inches in length. One end of each tube is bevelled and two circular grooves are cut in the other end of each tube.

7. The brass tubes are slid over the ends of the copper tube so that the grooved ends of the brass tubes are in contact with the first bends of the copper tube. The copper tubing should extend beyond the brass tubes or be flush with them to prevent the molten low-fusing metal from clogging the openings.

8. The tubing assembly is laid aside and one thickness of 22 gauge wafer wax is closely adapted to the investment model, covering the embossed portion and postdam area. The wax is trimmed to the edge of the embossed portion of the model around the peripheries and to

the groove representing the posterior border of the denture outline. The posterior portion of the inside of the finished tray will thus be raised and will serve as a postdam in taking the impression. The edges of the wax are luted to the model.

9. The tubing assembly is heated slightly and pressed to place on the wax. The tubing is luted to the wax. A handle is added to the tray by applying one thickness of base-plate wax over the posterior one-third of the brass tubes and attached to the wax covering the model. A flat piece of wax is attached to each buccal flange just anterior to the tuberosity and midway between the periphery and the bottom of the tray. These horizontal projections, when cast with the tray, will serve as convenient finger rests and facilitate the removal of the impression from the mouth. (Fig. 6.)

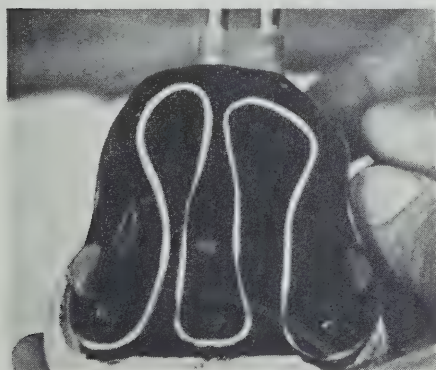


Figure 6

Model, with one thickness of 22 gauge wafer wax adapted over embossed portion and over postdam area; copper tubing luted to wax; handle and posterior finger rests waxed to place.

10. A new base is added to the model, extending the borders one-half inch laterally, anteriorly and posteriorly, and the crevice below the periphery of the wax is filled in. A groove is made in the middle of the border all around the model.

11. Separating medium is applied to all exposed parts of the model; the model is boxed with wax (the anterior ends of the brass tubes should be outside the boxing), and investment is poured into the boxing, covering the waxed portion completely.

12. The mould is placed in a pan of cold water and heated moderately.

13. The two halves of the mould are separated and the wax is flushed out.

14. Two round gates one-quarter inch in diameter are cut in the heel of the mould, one at each tuberosity, extending into the space left by the pattern. Gates should be made by semi-circular grooves in each half of the mould.

15. The halves of the mould are flushed out and placed together and the edges sealed with investment.

16. The mould is dried out and placed in any container that will hold it in an upright position with the gateways at the top.

17. Four ingots of H-tray metal, developed by Dr. B. L. Hooper, are melted and poured into one of the gateways until the metal comes to the top of the other gateway. (Fig. 7.) The mould is allowed to cool for at least fifteen minutes before opening.

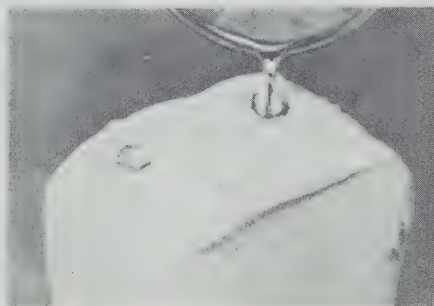


Figure 7

Pouring the molten tray metal into mould.

18. Sprues are cut off with carborundum disks and edges are smoothed with a vulcanite bur, vulcanite scraper and sandpaper disks. (Fig. 8.)



Figure 8

The sprues of the cast tray are cut off with a carborundum disk.

19. A three-sided spear-shaped drill is made by cutting the sides off a No. 560 bur H.P.

20. Holes for retention of the hydro-colloid are drilled through all parts of the tray approximately three-thirty-seconds inch apart. All holes are started from the tube side of the tray to prevent puncturing the tube. (Fig. 9.)

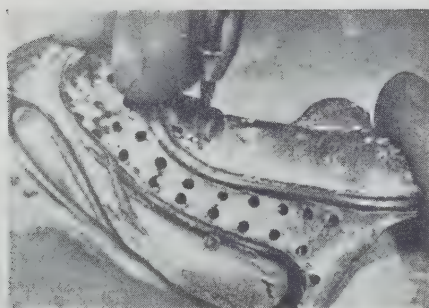


Figure 9

Drilling retention holes with a spear-shaped bur.

A tray constructed in this manner fits the mouth accurately, requires a minimum amount of impression material and aids in the production of a satisfactory impression. (Figs. 10 and 11.) It is inexpensive and can be made easily by the dentist, the technician or the assistant.

In using the tray, rubber tubes are



Figure 10

Front view showing fit of finished tray.

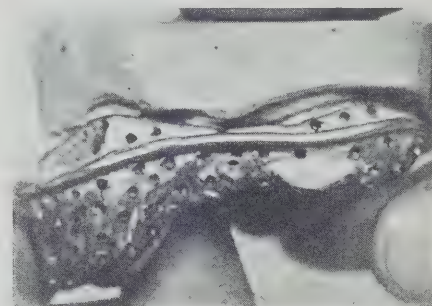


Figure 11

Side view of tray shown in Figure 10.

placed on the projecting brass tubes and a connection is made with the water supply of the unit. Ice water is more effective. The water can be drawn through the tray by attaching one rubber tube to the saliva ejector while the other tube is placed in a pan of water, or an irrigating receptacle can supply the water by the force of gravity.

Because of the small amount of impression material used and the excellent conductivity of the metal, rapid complete cooling occurs almost immediately, about one pint of ice water being sufficient to thoroughly chill the impression. (Fig. 12.)

In making trays for subsequent cases one might recover the H metal from previously made trays. However, some men prefer to build up a collection of trays to use when the occasion permits.



Figure 12

Colloidal impression taken in specially made water-cooled tray.

One precaution in sterilizing these trays should be noted. The H metal melts at a temperature between 75° and 79° C. and so the placing of the trays in boiling water in a sterilizer would cause their destruction. Some cold liquid antiseptic such as a 70% solution of alcohol should be used for sterilization of the trays.

Water-cooled trays can also be made with any of the acrylic or similar plastics used for making base-plates or trays, instead of the low-fusing metal. The first part of the technique for making this type of tray is the same as for the metal tray outlined above, up to and including the making of the embossed model and the tube assembly. The tube assembly is placed upon the tin-foiled, embossed model and the plastic in sheet form, moistened on its under side with the plastic liquid to make it adhesive, is pressed *over* the copper tubing and conformed to the model. The tubing will thus be exposed on the inside of the tray. A handle is made by wrapping a piece of the plastic around the projecting brass tubes. The plastic material in place on the model does not have to be covered and is cured as recommended by the manufacturers. After curing the peripheries are smoothed and retention holes are drilled. (Fig. 13.)

Other suggestions that may prove help-

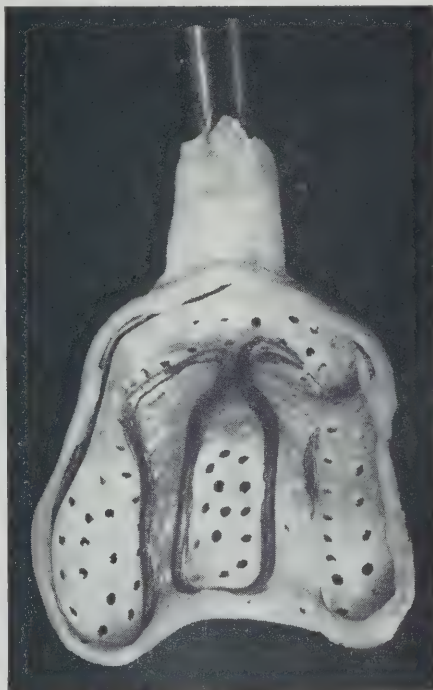


Figure 13

Special water-cooled tray made with acrylic or similar plastic material.

ful in immediate denture prosthesis include the making of a profile template photographically, the preparation of the model for the setting of the anterior teeth, and a method of constructing a surgical matrix of clear acrylic resin.

THE PROFILE TEMPLATE

A permanent record of the existing vertical dimension and the contour of the lips in repose can be obtained by making a template photographically. This type of template is made by making a side view exposure of the patient's face with any small camera while the patient holds a six inch celluloid ruler directly in front of the face and in the field of the picture, the ruler to serve as a guide in making the finished photograph full size.

The full size photograph is made by means of the usual enlarging equipment,

increasing the size of the image projected from the original negative, until the shadow of the ruler included in the negative coincides exactly with the ruler itself placed upon the printing table.

This enlarged photograph is then mounted on thin cardboard by means of photographic mounting tissue after which it is cut along the profile of the face. (Fig. 14.)



Figure 14

Register of centric relation showing use of corrected profile template to verify pre-determined vertical dimension.

In some cases, because of the severe over-bite, it may be considered necessary to open the bite. The desired opening can be obtained with wax or compound, at which time a new photograph is taken to produce a template representing the corrected vertical dimension.

The accepted vertical dimension template is used in future stages of the work including the establishment of centric relation, the try-in of the posterior teeth, the relining of the denture, or at the time a new denture is made.

PREPARATION OF THE MODEL FOR THE SETTING OF THE ANTERIOR TEETH

There are a variety of ways of constructing immediate dentures. The author prefers to make a denture with a labial flange rather than to butt the teeth against the gum. Where a labial flange is to be used the anterior ridge must be trimmed or bevelled in order to be able to set the artificial teeth in approximately the same place occupied by the natural teeth. The author also prefers to extract the posterior natural teeth, with the possible exception of one occluding bicuspid on each side in the cases where the bite opening is satisfactory, from a month to six weeks previous to the taking of the impression for the construction of the denture.

This procedure will provide a posterior ridge considerably well healed before the time of the extraction of the anterior teeth and will assure longer wearing of the denture before refitting is necessary.

In setting up the anterior teeth where bevelling of the ridge is to be done, there are three methods that may be followed, namely: (1) where every other tooth is removed from the cast and the corresponding tooth set in place; (2) where the three anterior teeth of one side are removed and the porcelain teeth are set; and (3) where all of the anterior teeth are cut off and the six anterior teeth are set up. The third method is the least desirable.

When existing positions of the natural teeth require alteration, such as when the median line is off center, the teeth protrude anteriorly, or extend too far below the lip, the author prefers the three teeth-

at-a-time method. However, where the natural tooth positions merit exact duplication or only slight modification in their replacement, the every-other-tooth method is desirable. The trimming of the ridge of the cast can be done much more easily when the three-teeth-at-a-time procedure is followed. A duplicate cast should always be available for comparison and measurement.

The first method is known as the alternate tooth method. The gingival borders of the teeth on the stone cast are outlined with lead pencil. This being done, any one of the four incisors can be removed with a jeweler's saw, or a safe-side carborundum disk and a knife, care being taken not to injure the adjacent teeth. The tooth is cut off even with the gingival border without making a depression to simulate a socket.

The labial surface of the anterior ridge is measured, with a caliper, from the gingival border of one of the central incisors to the peripheral turn. The surface is divided into thirds and a horizontal line is drawn upon it from cuspid to cuspid at the point representing the junction of the middle third and the incisal third of the labial plate.

Another line is placed on the incisal

border of the ridge in the area where the tooth was removed, at a point representing the junction of the anterior and middle thirds of this area.

These two lines represent the superior-inferior extent of the trimming. (Fig. 15.) A rounding bevel is made between these lines, the depth of the cut seldom exceeding one-sixteenth of an inch. The deepest part of the cut is at a point opposite the labio-lingual border of the remaining teeth, and, from this point, the depth of the bevel diminishes to a feather edge at both the upper and lower borders of the cut. (Fig. 16.) In general, no cutting is done lingual to the anterior teeth except to smooth off the gingival margins.



Figure 16

Showing one artificial tooth waxed in place and another area trimmed ready for placement of tooth.

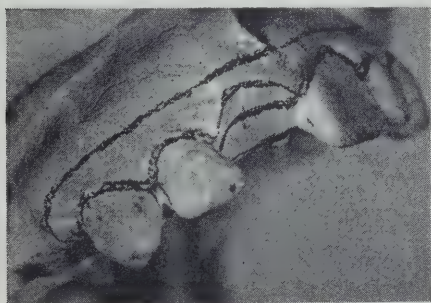


Figure 15

Gingival margins outlined with lead pencil, upper limit of bevel marked on labial and lower limit of bevel marked on crest of ridge in area from which one stone tooth was removed.

The artificial tooth is then ground to fit the trimmed area and waxed to place.

The same process is repeated in alternate positions until all the teeth have been placed.

In this method it is somewhat difficult to produce a smooth ridge at the time of setting up of the teeth due to the interproximal ridges of stone that may remain. This smoothing can be accomplished after flasking and flushing the case preparatory to processing.

In the three-teeth-at-a-time or group method, the same general procedure as outlined for the alternate tooth method is

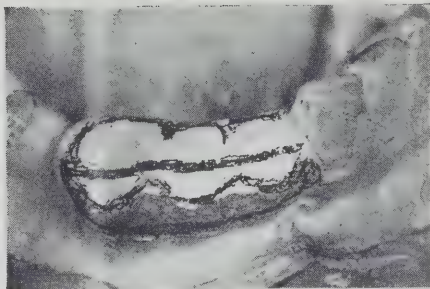


Figure 17

Central, lateral and cuspid cut off to gingival borders. Pencil lines on crest of ridge and labial of ridge show respectively the upper and lower limits of the rounded bevel.

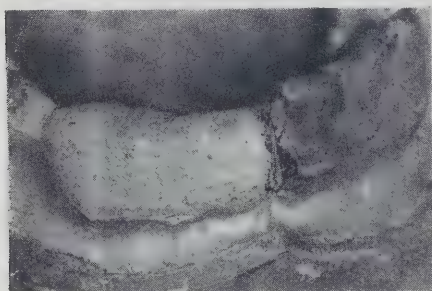


Figure 18

Ridge completely trimmed and smoothed.

used. (Figs. 17 and 18.)

When the trimming is completed, the teeth are ground and set up, reference being made visually and by measure to the duplicate model. (Fig. 19.)

In cases of marked prominence of the teeth and ridges where it is desirable to place the artificial teeth farther ridge-ward and backward from the positions occupied by the natural teeth, a greater amount of trimming of the ridge is indicated. This additional trimming should be done as conservatively as possible, however, so that the labial undercut is not removed.

CONSTRUCTION OF A CLEAR ACRYLIC RESIN SURGICAL MATRIX

When it is desired to construct a transparent surgical matrix, the following

technique can be followed. (Fig. 20.) After the case has been flaked and flushed out, select an empty flask which is a duplicate of the one holding the case. Place the ring portion of the second flask on the base portion of the flask in which the cast is embedded. Moisten the cast with water and pour liquid hydrocolloid into the flask until it is completely filled. Cover the flask and place in cold water until the colloidal material is thoroughly chilled. The liquid hydrocolloid is made by heating, in a double boiler, four sticks of hydrocolloid in a pint of water until the hydrocolloid is melted and the mixture free from lumps.

Separate the two halves of the flask. Vibrate plaster of Paris into the colloid impression in the ring portion and also fill the base portion of the duplicate flask with plaster and put both parts together.



Figure 19

Three artificial teeth ground and waxed to place and compared to stone teeth of duplicate model.

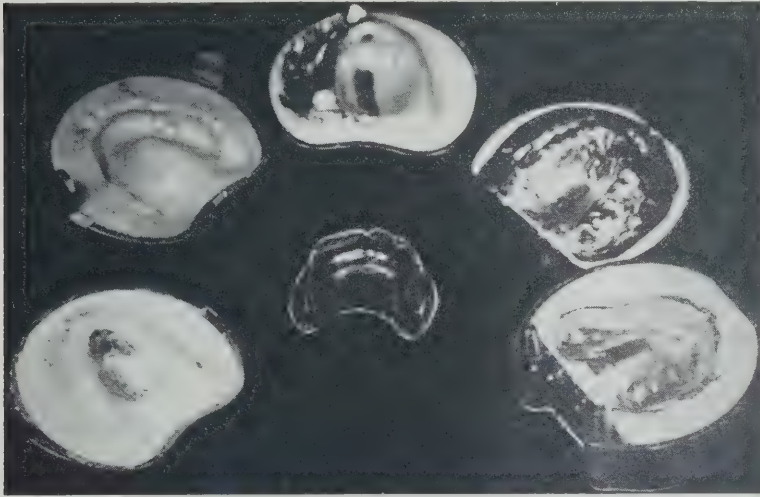


Figure 20

Steps in making surgical matrix. Starting at the left, the first flask contains the original model. The second (ring portion of an identical flask) contains a hydrocolloid duplicating impression of the original model.

When the plaster is set, separate the two halves and remove the colloidal material from the ring portion of the flask.

Adapt one thickness of base-plate wax to the plaster model. Cover the wax with 3/1000 tinfoil and turn up the edges of the foil. Apply separating medium on the exposed plaster, place the ring portion of the second flask in position and fill with plaster. When the plaster has set, heat up the flask and separate. Remove the wax and flush the case with water.

Tinfoil the model with 1/1000 foil and pack clear acrylic resin in the mould.

Process the case and smooth up the peripheries of the matrix and it is ready for use. (Fig. 21.)

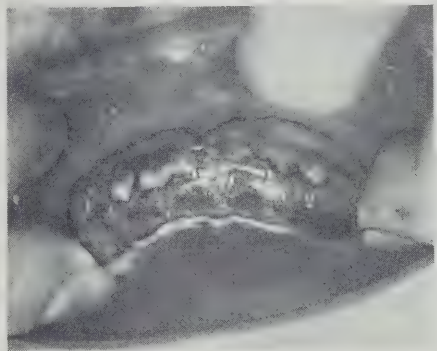


Figure 21

Showing use of surgical matrix to determine possible need for further trimming of high points of bone. Blanched areas of the mucosa indicate location of bony prominences.

Conventions

64TH ANNUAL MEETING OF THE EASTERN ONTARIO DENTAL ASSOCIATION,
OCTOBER 27-28, CHATEAU LAURIER, OTTAWA, ONTARIO.

AMERICAN DENTAL ASSOCIATION, HOUSTON, TEXAS, OCTOBER 27-31, 1941.

GREATER NEW YORK DENTAL MEETING, DECEMBER 1-5, HOTEL PENNSYLVANIA,
NEW YORK.

The Forum

• SOME PROBLEMS OF FOCAL INFECTION AS SEEN BY THE BACTERIOLOGIST

by J. L. T. APPLETON, B.S., D.D.S., Sc.D.
Professor of Bacteriopathology, School of
Dentistry, University of Pennsylvania
(Summary of paper in *N.Y. Jour. of Dentistry*,
March, 1941)

LIMITING ourselves to those cases of focal infection in which a secondary localization of bacteria from the blood stream is responsible for the appearance of a localized lesion, the mechanisms involved may be profitably studied by an exploratory discussion of the following questions:—

1. What factors influence the survival of bacteria at the primary focus? Possibly, there is a selection and/or adaptation of the bacteria, resulting in a strain better fitted to hold its own against the defences of the host. This is an unproved possibility for which no direct evidence is available. If such a selected or adapted strain develops, it presumably would be better able to survive, not only at the primary focus, but also in the blood stream and at a site of secondary localization.

2. What factors influence their escape from the primary focus? Possibly their "fixation" by the inflammatory process, thrombosis of lymphatic capillaries, antibacterial properties of lymph and efficiency of "filtering" effect of lymph nodes interfere with their escape. Mastication and surgical trauma (e.g. scaling and extraction of teeth) favour their escape.

3. What factors influence their survival in the circulating blood? Anything that depresses the antibacterial power of the blood plasma or the phagocytic function of the reticulo-endothelial system. Structural conditions, such as a patent foramen ovale or the vertebral veins (Batson), which offer by-passes whereby the bacteria may escape the "filtering" action of the lungs or liver, increase the

chances of blood-borne bacteria to survive.

4. What factors influence their secondary localization from the blood stream, at particular sites? Circulatory disturbances, caused by or associated with congenital defects, trauma, scar tissue, special functional demands, pressor effects, anoxia, or inflammation,—seem to be factors which on occasion determine the localization of bacteria. The evidence perhaps warrants the suggestion that conditions which favour an increase in the blood flow to a part or in capillary permeability, favour the escape of bacteria from the capillary lumen.

5. What factors influence the survival, reproduction, and functioning of bacteria at these sites of secondary localization?

This question leads us back to our first. Thus the cycle is completed.

• SECONDARY INFECTION IN THE GASTROINTESTINAL TRACT FOLLOWING ORAL DISEASE

by SAMUEL WEISS, M.D., F.A.C.P.
Clinical Professor of Gastroenterology, N.Y.
Polyclinic Medical School and Hospital.
(Summary of paper in *N.Y. Jour. of Dentistry*,
March, 1941.)

IT IS important to recognize the relationship of gastrointestinal disease to the foci of infection from distant sources, such as the oral cavity and the upper respiratory tract. We cannot overlook the fact that focal infections, especially dental, may be the undoubted cause of disease in almost any tissue of the body.

Removal of these foci from healthy as well as sick individuals, should be undertaken as soon as possible unless it is contraindicated because of the patient's general condition.

Not all cases are improved after removal of infectious foci. In fact, recovery often fails to follow because of disturbed physiology. Functional dis-

turbances may often improve even without removal of the primary cause, provided nature comes to the patient's defence. Exacerbations may result in some cases after surgical procedure; the patient may have remote complications.

In the final analysis it is important that the internist decide whether or not it is advisable to remove at a given time the primary focus, and the physician should exercise a conservative attitude regarding the wholesale removal of teeth, tonsils and the draining or radical operation on the sinuses.

• JACKET CROWNS

"Do's and Dont's" in Jacket Crown Preparation

by Dr. H. SPALDING BOTH, New York

1. The prepared tooth should resemble the original tooth in anatomical outline.

2. Remove, so far as is humanly possible, the natural enamel only.

3. Center the natural tooth in the center of the jacket crown, thereby not making the jacket too thick or too thin on one or more surfaces, usually too thick labially and too thin lingually.

4. Protect the vital pulp with a sufficient amount of dentine on all surfaces.

5. Do not cut too deep cervically or gingivally at interproximal areas.

6. Do not cut the natural tooth too short incisally or occlusally.

7. Protect vital sensitive dentinal tubuli with a good cavity varnish before taking copper band impression.

8. Do not impinge on, or change position of, gingival tissues with temporary crown.

PROSTHETIC PROCEDURE

1. Place amalgam die accurately into plaster impression.

2. Note gingival outline on plaster impression and indicate its position by following the curvature of gingival tissue with a scratch on die.

3. Pour, separate, and articulate models, remove die from model, adapt soft

platinum foil matrix, gauge 1/100, to amalgam die.

4. Cover all platinum with opaque porcelain and bake.

5. Condense porcelain of proper colour and translucency and build to slight oversize and bake.

6. Replace on model, check for contact point, colour, anatomical form and occlusion.

7. After jacket is fitted in mouth, make all further corrections and give final glaze.—*N.Y. Jour. of Dentistry*, Feb., 1941.

• THE RETENTION OF THE WHEAT VITAMINS IN FLOUR AND BREAD

A Problem of National Importance

by Frederick F. Tisdall, M.D., F.R.C.P.(C), S. H. Jackson, Ph.D., T. G. H. Drake, M.B., F.R.C.P.(C), L. H. Newman, B.S.A., D.Sc., A. G. O. Whiteside, B.S.A., M.S., H. Miller and J. Edgar, B.S.A.

(Summary of paper in the *Can. Med. Assoc. Jour.*, August, 1941)

CANADIAN dietary surveys show that a large proportion of our population are consuming diets which are inadequate for optimum vigour, efficiency and resistance against disease.

The Canadian people as a whole are not receiving the amount of vitamin B₁ necessary for optimum mental and physical efficiency. As the distribution in foods of the other members of the vitamin B complex parallels to a degree vitamin B₁ the adequacy of the vitamin B complex as a whole in the Canadian diet is open to question.

Canadian wheat is one of our richest sources of vitamin B₁, and is also a good source of most of the other members of the vitamin B complex. White flour contains only one-sixth to one-quarter of the original vitamin B₁ content of the wheat and a small percentage of the other members of the B group.

White flour has been produced which retains from 50 to 60 per cent of the vitamin B₁ originally present in the

wheat, and an increased amount of other members of the B complex. The flour can be made at practically no increase in cost over ordinary white flour. Bread made from this flour has an excellent flavour and all the physical characteristics of ordinary white bread.

The use of this type of flour in making white bread would place white bread in the "protective" group of foods. The additional vitamins retained should be a real factor in improving the health of the nation.

• SALESMAN . . . SUCCESS

Editorial, The Bulletin of The Cleveland Dental Society, p. 10, March, 1941

MANY hundreds of items are ordered and thousands of dollars are spent annually by the dental profession. There is nothing strange about those facts except that much of it is done by telephone or by an assistant. True it is that many dentists are so busy that they cannot take time out to exchange a few pleasantries with the representatives of their supply house, that others have secretaries capable of spending money judiciously and wisely, while others are indifferent to the calls of the trade people. Those of the profession who come within the limits of the above classification are depriving themselves of their strongest booster and most ardent enthusiast, and their most capable constructive critic. Your dental salesman is just that, for the obvious reason that his success depends on you, and because he gets about and is in a position to know.

"A word before is worth two after" may well be applied to advice your salesman can offer. He knows of the latest materials, their properties and uses. He can tell you how to meet and serve the most discriminating patient because he calls on men who have become successful doing just that. He can see your shortcomings more quickly than you or your staff because he has a basis for compari-

son—the other men of the profession at work. He sees you as you are seen by the prospective patients and not as you think you are seen. The next time your salesman calls, give him a greeting. An exchange of ideas, and an invitation to survey and criticize will turn your salesman into your best friend, and he may be the stepping stone to higher peaks of successful practice.—*Dental Outlook*.

• GINGIVECTOMY AND THE LIKE

ONE of our bacteria-drenched pyorrhea specialists has claimed, because all specialists always claim, rather than suggest, that more correct treatment of incipient pyorrhea in the Army would mean the loss of fewer teeth to the troops. This time the treatment is Old Faithful, or gingivectomy. So the nation's teeth can still be saved—by gum! Call 'em up, sit 'em down and cut 'em up! The modern Army will kindly forget about moving on its stomach and advance on its gingivæ—or what is left of them.—



Excerpt from the Dental Front by Edward Samson, L.D.S.R.C.S. Eng. F.C.S., Dental Magazine and Oral Topics.



PRINCE EDWARD ISLAND

*Editor*—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

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QUEBEC

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ONTARIO

*T. R. Marshall, Toronto**F. C. Harwood, Moose Jaw*

NOVA SCOTIA

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ALBERTA

*John Clay, Calgary*

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MANITOBA

*J. F. Morrison, Winnipeg*

BRITISH COLUMBIA

*J. S. Bricker, Vancouver*

Quantity versus Quality

At the many conventions which the writer has attended the emphasis has been placed almost invariably upon Quality, not Quantity. Lecturers and clinicians have vied with one another in their effort to popularize some new technique regardless of the time consumed in following such a procedure. No doubt we all agree that the chief stress should be placed on Quality, that all dentists should render the finest and most conscientious service of which they are capable; but on the other hand, a most careful study should be made of Quantity so that as much as possible can be accomplished in a given time. For instance, it is well known that some dentists prepare a cavity and insert a beautiful amalgam filling in less than half the time taken by the average dentist. Such skill calls for careful study and attention to details; it calls for an assistant who has been carefully trained and who has the initiative to act without being told; it demands every possible aid to speedy operating and a studied technique that permits of no unnecessary movements. To accomplish this end is worth every effort and the study it demands, as the results give great satisfaction and pleasure.

On the other hand, this problem of Quantity Production raises a prob-

lem, particularly in the field of public dental service, which points to breakers ahead in the stream of our professional life if something isn't done to correct the present tendencies. The habit of basing the ability of a dentist in public health service upon the "statistical" quantity of work he performs or reports rather than on the quality is pernicious and should be corrected whenever and wherever it appears. This problem does not arise so often in the well-organized and efficiently-run systems in some of our larger centres; but in smaller places, where members of School Boards sit in judgment upon a service of which they are entirely ignorant, the results tend to disaster and certainly work out to the detriment of the service, causing really poor service to the children who are treated, unless the dentist is particularly conscientious, in which case he would probably wash his hands of the whole bad business.

A glaring illustration of this colossal ignorance in the higher-ups is the case of a Manitoba dentist, who, some months ago, was employed by Federal authorities to work for the children in a certain Indian school and it was agreed that he should be paid so much a day. He rendered the service. There was never any question about the quality of his work but the authorities at Ottawa would only pay the dentist half the amount which had been promised him because he had not inserted as many fillings, etc., as the other men engaged in this service in other parts of Canada, men who no doubt had had the experience necessary to satisfy a group of men who were ignorant of all true dental ideals. At the time of writing this matter has not been settled, although the Manitoba Dental Board has made a great effort to have the problem adjusted.

The writer knows of other instances of school dentists who have not given satisfaction to school boards evidently because the dentist was conscientious and spent the time required to save an important broken down tooth rather than condemn it to the forceps in the interests of speed and quantity production. This viewpoint should be changed. It must be changed and the dental profession must change it for its own protection.

In the Ontario Dental Journal of last October Dr. Edmund A. Grant, Director of Dental Services in the schools of the City of Toronto, stated that a dentist working on a half-time service should be able to care for the needs of approximately 1,000 children per year. In other words in a ten months' period working three hours a day, 239 days, or 717 hours, the dentist is expected to complete the dental requirements for 1,000 children, one child every forty-three minutes. When one remembers that many of the children served in these clinics come from the homes of the indigent or near indigent in Toronto, these figures are difficult to understand. Dr. Grant is Director of a most efficiently-run School Service and we know that nothing but quality work would be tolerated and for this reason the writer feels that some further explanation should be given re these figures in the interests of public dental service in other parts of Canada.

Dr. Grant further states that the total cost of rendering such service in the average community should be \$3.00 per child for the first year and \$2.00 per year after the service has been in effect for some time and that in Toronto the service costs 87 cents per child remembering that only 50% of the school children receive treatment. If all the children were treated presumably the cost would be twice 87 cents per year or perhaps less as probably the children with the worst mouth conditions are the ones looked after. The writer does not wish to question these figures in any way but points out that mouth conditions in the children of Toronto schools must be very different to those existing in many other parts of Canada and that this being the case, the Canadian Dental Association should set up some kind of standard suitable for those sections of Canada where dentists are even facing the question of dismissal by School Boards because of failure to produce quantity figures in their statistics. Under these latter conditions a dentist must have strong convictions of what is right and wrong not to extract many teeth which should really be saved.

In a report received from Dr. John Oppie McCall, Director of The Murry and Leonie Guggenheim Dental Clinic of New York City, last March it is stated that about five hours is required to complete the average new case entering this clinic and two hours to complete the average recalled case. It is figured that the dentist has 1,500 working hours a year (*full time*) and in that time one dentist would complete 300 new patients a year or 750 recalled patients. In this Clinic the average number of cavities in new patients is 9.2 and in recalled patients 3.3. The latter figure may include pits and fissures in newly erupted teeth and not necessarily decay on new surfaces. In many of these patients, however, the new cavity is an approximal cavity in a deciduous molar or a permanent posterior tooth, necessitating the placing of a Class 2 filling. In the Canadian Dental Corps at the present time about a full day is required to make each patient dentally fit for army service.

A perusal of all these figures must surely convince the most skeptical that here is a big problem worthy of the attention of our National Association if the practice of dentistry is to be clarified in the minds of the public, perhaps even in the mind of the average dentist.

BOOK REVIEW

Dental Education in the United States, by John T. O'Rourke, B.S., D.D.S., Dean and Professor of Oral Medicine, University of Louisville, School of Dentistry, and LeRoy M. S. Miner, D.M.D., M.D., Sc.D., Dr. P.H., Dean and Professor of Clinical Oral Surgery, Harvard Dental School; Professor of Stomatology, Boston

University School of Medicine. With a Foreword by Raymond A. Kent, B.A., M.A., Ph.D., LL.D., President, University of Louisville. 367 pages. Published by W. B. Saunders Company, Philadelphia, 1941. Canadian Agents: McAlinsh and Company, Limited, Toronto. Cloth \$6.00.

This book outlines the evolution of Modern Dentistry, the Aims of Dental Education, Qualifications for the Study of Dentistry, and discusses the question of Curriculum, Basic Sciences, Clinical Dentistry, Orthodontia in the Dental Course, Training in General Medicine for the Dental Student, the Need for Modification of the Dental Course, Postgraduate and Graduate Education, Salaried Positions Available to Graduates, and the Public and Professional Aspects of Dentistry.

Discussion of the above subjects suggests a scientific approach to dental education which involves a closer co-ordination of dental and medical education. The result of this line of thought has, in the case of Harvard University, changed the Harvard Dental School into the School of Dental Medicine providing a five-year course leading to the degrees in both medicine and dentistry. It is stated that this course has for its purpose the training of a small number of students for research, teaching,

specialization and for the general practice of dentistry. It remains to be seen whether or not such a plan will produce either dentists or physicians.

If any of these graduates intend to practise general dentistry, as we now understand that term, they will require considerable extra technical training and we know that the man who wishes to become an expert technician should commence such training at as early an age as possible. If these graduates plan to practise as specialists they will require another group to undertake for them the reconstructive work in the mouth, which will necessitate the creation of additional auxiliary groups or an extension of the field of the dental hygienist as this book suggests.

As the whole future of dental practice is involved in the decisions discussed herein and since it is evident that every dentist is deeply concerned with those decisions, this book should be read widely.—M. H. G.

CORRESPONDENCE

Excerpts from Overseas Letter of August 18, 1941

To the Editor, Journal of the C.D.A.:

This so-called front line is quite different from the last war. I happen to be living with a very charming English family as their guest. It is out in the country and really as near to home atmosphere as one could expect. They have four children and have given me more or less the run of the house.

The boys of the unit, although not in as luxurious quarters, are all very comfortably situated. They are scattered, and of course work under varied conditions, but on the whole are not very far from the civilian type of practice.

Due to the movement of troops, one thing is very obvious, and that is we need the travelling or mobile clinic, which Col. Lott is trying now to produce in Ottawa. I sincerely hope this can, by some effort, be speeded up.

(Signed) J. F. EDGECOMBE, Lieut.-Col.,
O.C., 3 Coy., C.D.C.,
Canadian Army, England.

August 29, 1941.

To Dr. Wilmer Souder,
c/o National Bureau of Standards,
Washington, D.C., U.S.A.

In the July issue of *Dentistry*, a Digest of Practice, commencing on Page 685 there appears a paper on Amalgam by Dr. Robert K. Brown, of Ann Arbor. He states the following: "It is advisable to purchase only enough alloy to last three or four months as age will affect the surface condition of the particles."

I would appreciate very much having your opinion as to whether the efficiency of dental alloy is seriously affected by age.

(Signed) M. H. GARVIN.

Reply to Above Letter

To the Editor, Journal of the C.D.A.:

We have never found any evidence of deterioration of an amalgam alloy such as is regularly produced by our better grade of manufacturers.

Newly cut, unannealed alloy is supposed to change, as you have read in textbooks, with age. We made a few exploratory experiments

Correspondence

in this field some years ago, but did not feel that our findings added anything to the textbook reports. After an annealing at 100° C for a few hours the alloys seemed to be stable. This annealing treatment is thought to be similar to that employed by manufacturers of alloys.

We have on occasions used a package of alloys over an extended period of time, say two or three years, as a standard for comparisons, such as those on dimensional change. No data have been discovered which would indicate that the alloy had changed in any respect.

It would be very interesting to have Dr. Brown submit his data and describe the methods of testing to show the nature and extent of these changes. Such an article containing proper documentations would be of value to the profession.

(Signed) WILMER SOUDER,
U.S. Department of Commerce,
National Bureau of Standards,
Washington.

September 16, 1941.

To the Editor, Journal of the C.D.A.:

In a discussion group at the Canadian Institute of Public Affairs this summer, the poor economic position of the farmer was under consideration.

It was suggested that the farmer felt very strongly and with justification that he was being unfairly treated but that he would not do anything to help himself by organizing and pressing his case. Rather, he expected other people or "the government" to do it for him. So long as this was true, it seemed inevitable that he would continue to suffer.

On reading your excellent editorial in this month's Journal, I felt that the same thing was true of dentistry. That this war will be followed by very fundamental changes in our whole social and economic structure seems certain. In view of this dentistry must be thoroughly organized on a National basis if its interests are to be safeguarded.

All power to you in your effort to awaken us individual dentists to this need. The very nature of our work has a tendency to make us, like the farmers, individualists. In modern society individuals count for little—only organized groups can really influence conditions.

As, in the long run, what is truly good for any useful group in the community, must be good for the whole, we are working for the national welfare when we strive to improve the position of dentistry.

(Signed) H. N. WILKINSON.

86 Bloor Street W., Toronto.

DENTAL CORPS NEWS

News from M.D. No. 10, Headquarters Winnipeg, Manitoba

CHANGE IN COMMAND

A change has taken place in the command of No. 38 Coy., No. 2 T.C., R.C.A.F. Major C. W. Steele has been transferred to Western Air Command at Victoria, B.C., and Major N. S. Bailey has assumed command of No. 38 Company.

Eight C.D.C. Officers and sixteen N.C.O.'s and men are attending an instructional school at Shilo. The G.S.O. had this to say:—

"An interesting thing happened. The other day the school had a competition rifle shoot. There are 160 from all units in the school.

Three prizes were offered and the Dentals won them all. A Dental Officer won first, A Dental N.C.O., second, and a Dental Officer, third."

The officers of No. 30 and 38 Coys., held a dinner on August 15, the occasion being the send-off to Major Steele, a welcome to Major Bailey and the early departure to overseas companies of Captains M. Wachnow, J. L. G. Carson and J. B. Rumberg.

Chair Assistants

The Canadian Dental Corps is now taking applications for women chair assistants. Age limits, 21 to 40 years.



**Lt.-Col. E. F. Allen,
Officer Commanding,
No. 4 Dental Company**

Recent Routine Orders announce the promotion of Major E. F. Allen, C.D.C., to the rank of Lieut.-Colonel.

This officer served in France during the last war and has since conducted a practice in Vancouver, where he has been active in professional and public service.

He has been District Dental Officer of Military District No. 11 from the outbreak of war, and is now assuming command of No. 4 Dental Company for service with the 4th Division.



**2nd Lieut. (Qr. Mr.) J. K. McNally,
Canadian Dental Corps**

Recent Military Orders contained the announcement of the appointment of this young man to a commission in the Canadian Dental Corps.

Lieut. McNally joined the C.D.C. in January, 1940, and worked up to the rank of Sergeant. He was then recommended for his commission.

This officer was in the employ of the Dental Company of Canada and, also, the National Refining Company prior to the outbreak of war.

**Lt.-Col. E. M. Wansbrough, M.M.
Command Dental Officer,
No. 1 Training Command,
Toronto, Ontario**

Recent Military Routine Orders announce the promotion of Major E. M. Wansbrough to the rank of Lieut.-Colonel.

This officer served with infantry and machine gun units during the last war, and has since maintained his connection with the Canadian Militia as an officer in the Lorne Scots. He practised his profession at Shelburne, Ont.

Lt.-Col. Wansbrough was transferred to the Canadian Dental Corps in November, 1939, and shortly afterwards was appointed as Command Dental Officer, No. 1 Training Command, R.C.A.F., at Toronto.



NEWS FROM THE PROVINCES

ONTARIO:

Dental Health Exhibit at Canadian National Exhibition

The Ontario Dental Association, through its Public Dental Health Committee, responded to an invitation from the Ontario Educational Association to conduct a dental health display at the Canadian National Exhibition held in Toronto. The Provincial Department of Health, through its director, Dr. Hodgins, did much to make the experiment a success. The walls of the booth were decorated with dental health posters, many of them the result of health project teaching in Toronto schools. In the background was a suitable equipment, necessary for a school dental service for 500 or more pupils, costing under \$1000 new or under \$700 refinished. Parents, trustees, teachers and school inspectors were invited to discuss dental health educational problems. Teachers of rural schools particularly were frequent visitors. Two questions were very often asked—"Where can

I get teaching material on dental health?" and "How do we go about getting dental treatment for the children in our school?" The contacts made through these visitors to the display gave the committee in charge much valuable information to guide them in their dental educational efforts.

Congratulations Northern Ontario

On Saturday, September 20th, a new Dental Society had its birth at Haileybury, Ontario. Dr. S. L. Honey of Timmins presided at the sessions. There were some 40 men in attendance accompanied by their ladies, some coming as far as 200 miles to the meeting. The ladies were entertained in the afternoon by a scenic boat trip, arriving back in time to have dinner with the men.

During the afternoon papers were presented by Dr. D. W. Gullett, Secretary, Royal College of Dental Surgeons, Dr. H. S. Thompson, Secretary, Canadian Dental Hygiene Council, Dr.

E. T. Guest of Toronto and Dr. W. J. Linghorne of New Liskeard.

Col. F. M. Lott, Director of Dental Services, Canadian Dental Corps, was the guest speaker at the banquet table.

The new officers elected were President, Dr. L. H. McCool, and Secretary, Dr. R. B. Hambly, both of North Bay.

Best wishes to the new Northern Ontario Dental Society.

Dental Nurses' Alumnae Holds Bazaar

On September 9 the Dental Nurses' Alumnae held its opening meeting for the year 1941-42 in the Faculty of Dentistry building.

In her opening address, President Anna Lindsay asked for the earnest co-operation of all members in making this a most successful year. The graduates of last year's class in dental nursing were warmly welcomed to the Alumnae and are now an important part.

Miss Welda Leask, bazaar convener, reported that arrangements for the bazaar to be held in the Faculty of Dentistry building on Saturday, October 25, from 2 to 9 p.m., were well under way. Proceeds will be used to secure a mobile unit for the Canadian Dental Corps.

Dr. I. H. Ante, Professor of Crown and Bridge Prosthesis, spoke on the subject of interest to all dental nurses, "The Public and Relationship to the Dental Office." He cleverly illustrated various phases of the subject with coloured moving pictures.

HELEN MCKINLEY.

Ontario Dental Nurses' and Assistants' Association Officers 1941-1942

President: TOMYE TURNER, 195 Yonge Street, Toronto.

President-Elect: LORETTA MCCAUGHEY, 359 Central Avenue, London.

Vice-President: JEAN STEELE, 647 King Street West, Kitchener.

Recording Secretary: MARJORIE CREES, Point Edward.

Corresponding Secretary: HELEN CAMPBELL, 2357 Bloor Street West, Toronto.

Treasurer: DORIS GREGORY, 2333 Bloor Street West, Toronto.

Dental Nurses and Assistants throughout Ontario are cordially invited to join our Pro-

vincial Association. Information and membership application cards may be obtained from the Membership Convener, Loretta McCaughey, 359 Central Avenue, London.

ESSEX AND KENT COUNTY CHAPTER: On September 8, the members of the Essex and Kent County Dental Assistants' Association held their first meeting of the present season in the Canada Building. The Past President, Dorothy Scott, presided in the absence of the President, Janet Hamel, and the Vice-President, Florence Minchin of Leamington. A most satisfactory financial report was read by the newly elected Treasurer, Barbara Wood, and Trudy Hohner Smith of Chatham assumed the duties of Recording Secretary. During the meeting, the members decided to again sponsor a raffle, the proceeds to be used for war work. Winifred Grier was named convener. The Provincial War Fund will be subscribed to under the chairmanship of Nora Kelly and the members are asked to contribute to the best of their ability.

At the close of the business meeting, Dr. I. H. Steinberg, assistant professor of operative dentistry at the University of Detroit, addressed the members on the subject of "Amalgams".

WINIFRED GRIER, *Secretary*.

KITCHENER DISTRICT CHAPTER: At a recent meeting of the Kitchener District Chapter, Edith Inkster was re-elected to the Presidency. The following officers and conveners were chosen to serve with the President. Yvonne Jacques, Vice-President; Ruth Rotters, Treasurer; Ruth Clark, Secretary; Ann Smuck, War Service Convener; and Ruth Janke, Welfare Convener.

Jean Steele, who last year held the office of Vice-President of the Kitchener District Chapter, was honoured at a shower immediately following the meeting. Miss Steele is the newly elected Vice-President of the Ontario Dental Nurses' and Assistants' Association, and her marriage, to Dr. A. W. Boland of Aurora, will be an event of late September.

During the summer months, the members have continued an extensive war work program.

On Wednesday evening, September 10, the members met for dinner at the Maple Club and a general business meeting ensued. Miss

News from the Provinces

Inkster presided and a tentative program was arranged for the new year.

RUTH CLARK, *Secretary*.

LONDON DISTRICT CHAPTER: The first Fall meeting of the London District Dental Nurses' and Assistants' Association was held in the office of Dr. D. A. Campbell. The President, Dorothy Innes, was in the chair. Plans for the coming year were discussed and it was decided to have outside speakers at the meetings. Ruth Walker was appointed Social Convener and Irene Challoner will serve as Membership Convener.

A gift was presented to Madeline McKay, the retiring President, in appreciation of her splendid leadership during the past two years.

The next meeting will be held in the office of Dr. H. D. Taylor, 532 Dundas Street, London.

ISOBEL SCOTT, *Secretary*.

SUDBURY DISTRICT CHAPTER: We regret to announce that Dorothy Fowler, President of the Sudbury District Chapter, has resigned her office because of ill health. Ina Leikas will assume the Presidency and the executive will include, Ada Gilliland, Vice-President; Bernice Boyd, Secretary; and Mary Kennedy, Treasurer.

The members of the Sudbury District Chapter will hold their first Fall meeting on October 6, in the Capitol Theatre Building, Sudbury.

BERNICE BOYD, *Secretary*.

The members of the executive of the Ontario Dental Nurses' and Assistants' Association will meet at the Prince Edward Hotel in Windsor, on October 4.

The Provincial President, Tomye Turner of Toronto, will take charge of the meeting and initial plans for our annual convention will be made at that time.

FERNA LEECH COOK, *Publicity Convener*.

NOVA SCOTIA:

Annual Meeting

The fifty-first annual meeting of the Nova Scotia Dental Association took place July 28 and 29 at Dalhousie College, Halifax. The attendance was one of the largest in the history of the Association and a number of guests from the United States and the Canadian Army Dental Corps swelled the total.

Officers for the ensuing year 1941-1942 are as follows:

Dr. J. H. H. Rice—President.

Dr. N. McG. Layton—Senior Vice-President.

Dr. L. G. Israel—Junior Vice-President.

Dr. J. S. Bagnall—Secretary.

The Executive includes the above officers and Dr. J. W. Dobson.

The D.D.C. Representative Dr. W. C. Oxner was reappointed with Dr. Dobson as alternate.

The C.D.A. delegate appointed is Dr. V. D. Crowe of Truro with Dr. G. B. Richmond as alternate.

The Provincial Dental Board remains as it was:

Dr. W. H. H. Beckwith, President, Halifax.

Dr. S. G. Ritchie, Vice-President, Halifax.

Dr. W. C. Oxner, Halifax.

Dr. G. M. Dewis, Sec.-Registrar (pro tem), Halifax.

Dr. V. C. Calkin, New Glasgow.

Dr. M. E. Morrison, Canso.

Dr. G. B. Richmond, Sydney.

The business meetings of the Association were well handled by the outgoing president, Dr. Burke, and the Association is found to be in a very healthy condition financially and otherwise.

The guest Clinician, Dr. Felix French of Ottawa, who dealt with some of the difficult problems in Prosthetics, got an enthusiastic reception, and everyone present at the various sessions hopes that this visit to Nova Scotia by Felix will be the precursor of many more to follow.

Other contributors to the program were Dr. Dalglish who offered very beautiful coloured films on Office Management; Dr. W. H. H. Beckwith in a fine demonstration of the use of the electric mallet in condensing gold; Dr. Allan Dunlop in a demonstration on moist specimens of the technique of block-anaesthesia.

Immediately after the close of the convention a golf match was held at the Halifax Golf and Country Club in which the lucky number of thirteen were present and played. Prizes were awarded, every player receiving one. The major prizes went to Dr. G. R. Hennigar with the low Gross Score, and to Dr. Oxner with the low Net Score.

In the group were Drs. Vaughan and Robertson of New York, also three members of the C.A.D.C.

BRITISH COLUMBIA:

Pacific Coast Dental Conference

Portland, Oregon, the "City of Roses", was host to the 6th Triennial meeting of the Pacific Coast Dental Conference on July 7-11, 1941. Thus the Conference returned to the City where its first meeting was held in 1926. A week of perfect weather, made to order for convention purposes, added greatly to the enjoyment of the members attending the meeting.

A hearty welcome, not only by the Portland dentists, but by the Mayor of Oregon and the Secretary of State of the State of Oregon; and a button-hole of a beautiful rose bud, served to add to the friendliness at the opening of the meeting.

A very fine registration, and in every way a successful meeting greeted the guest clinicians attending from many different parts of the country.

Wilfred H. Robinson, President of the American Dental Association, addressed the meeting. Other guests included:

Maurice L. Tainter, A.N., A.M., M.D., Professor of Pharmacology, Stanford University.

W. K. Livingston, B.A., M.A., M.D., Assistant Clinical Professor of Surgery, University of Oregon Medical School.

Joseph A. Pettit, M.S., M.D., F.A.C.S., Professor of Clinical Surgery and Surgical Anatomy, North Pacific College of Oregon.

Michael J. Walsh, B.Sc., M.Sc., A.I.C., Ch.E., San Diego, California, Consulting Nutritionist of Medical and Dental Professions and Instructor in Nutrition and Diet, University of California, Extension Division.

Elmer Verner McCollum, B.A., M.A., Ph.D., Sc.D., LL.D., Professor of Biochemistry, School of Hygiene and Public Health, Johns Hopkins University.

Ernest R. Granger, D.D.S., F.A.R.D., F.A.C.D., F.N.Y.A.D., Mt. Vernon, N.Y.

Rudolph O. Schlosser, D.D.S., F.A.C.D., Chicago, Illinois, Professor of Prosthetic Dentistry, Northwestern University.

Clarence O. Simpson, M.D., D.D.S., St. Louis, Missouri.

A. F. Schopper, D.D.S., Kansas City, Missouri.

In addition there were many clinicians from the Conference area itself.

The Pacific Coast Dental Conference in-

cludes the states of Washington, Oregon, California, Idaho, Utah, Nevada, Arizona and Montana in the United States, and the Provinces of Alberta and British Columbia in Canada. This area prides itself on including some of the most prominent names in dentistry on its roll.

The Conference clinicians appearing on this program did full justice to the high standard expected of them. This tended to round out what was considered one of the best programs presented before a conference meeting.

Alberta and British Columbia, appreciating to the fullest, the many advantages of a conference meeting, had a fine attendance at Portland. Appearing on the program from British Columbia were:

Dr. J. T. Dawson, who presented a clinic on the "Ante System of Impression for Stabilized Lower Dentures".

Dr. W. K. Sproule, "Inlays".

Dr. G. D. Stibbs, "Gold Foil", operating with the Associated Study Clubs Clinic, under Dr. W. I. Ferrier, Director.

The following served on the various committees:

Clinics—William Miller, Vancouver, B.C.

Essays—R. W. Hall, Vancouver.

Publicity—J. Ewart Gee, Victoria.

Membership—D. Hugh Munro, Vancouver.

Public Health and Scientific Exhibits—R. L. Pallen, Vancouver.

Public Relations—J. F. Hill, Vancouver.

H. M. Cline of Vancouver served as Councillor from British Columbia to the Conference.

Through Dr. Hill it was arranged to broadcast over CBR the talk given by Dr. E. V. McCollum of Johns Hopkins University.

These gestures of support were much appreciated by other members of the Conference, especially in view of the many difficulties of attending at the present time. Not the least of these is the fact that many members from these Provinces are in the Canadian Dental Corps and hence were unable to attend.

The next meeting of the Pacific Coast Dental Conference is to be held in Salt Lake City in 1944. The elected officers of this meeting are:

President: E. A. Tripp.

1st Vice-President: W. L. Warburton.

2nd Vice-President: A. F. Weeks.

Secretary: L. O. Halgren.
Treasurer: Hyrum Bergstrom.

ITEMS OF INTEREST

The clinics of everyday practice and the routine readily applicable to the ordinary practice were very popular.

The increased use of visual education teaching, colour photography even supplemented by sound.

Continued use of radio to reach the public.

Division of clinics into small groups to allow all interested to hear the clinicians.

This report of The Pacific Coast Dental Conference is presented by British Columbia's Councillor, Dr. H. M. Cline.

ALBERTA:

Edmonton Dental Society

The Edmonton Dental Society held a golf and dinner meeting at the Highlands Golf Club on Wednesday, August 27. Non-golfers were requested to act as caddies, and no doubt, in watching the players, had the greater share of the amusement. I have watched some of the Edmonton golfers myself.

Dental Assistants Hold September Meeting

The Calgary Dental Assistants' Association held its first meeting of the season in the Dental Society Room of the Southam Building on September 8, at 6.30 p.m. Sixteen members were present and Mrs. F. Clarke, Mrs. Ruth Agate and Miss Margaret Auld served a lovely supper. A business meeting followed and plans were made for future activities of the Club.

MANITOBA:

Dental Nurses and Assistants

The Winnipeg Dental Nurses and Assistants' Association held its first dinner meeting of the season on Sept. 8, at the St. Regis Hotel. Miss Jean Gordon, President of the Association, presided. There were 30 members present. Miss M. Walsh of the Unemployment Insurance Commission was guest speaker and presented many enlightening facts on Unemployment Insurance. Plans were also discussed for the Victory Tea which is to be held on Sept. 20 at the home of Mrs. E. Roy Bier.

MARIE WASLO.

EMPIRE NEWS

GREAT BRITAIN:

President of the British Dental Association

We note with pleasure that Mr. J. B. Parfitt has been appointed President of the British Dental Association. His enthusiasm and many services to the profession are well known in Canada as well as in Britain. He succeeds Mr. Walter R. Wood who has also served the British Association so well and for so long. Mr. Parfitt is also one of the Empire Correspondents of the Journal of the Canadian Dental Association.

Scope of National Health Insurance Scheme to be Widened

The Government will shortly introduce a bill which, among other effects, will bring black-coated workers earning up to £420 a year within compulsory health insurance.

About 500,000 people will be affected by the raising of the income limit, and the change

will cost the Exchequer £1,300,000 a year.—*D. Mag. & Oral Topics, May-June, 1941.*

Vitamin C Deficiency and the Potato

by R. W. H. TAVENNER, I.D.S. Eng.,
I.D.S. Univ. B'ham.

Lecturer in Dental Surgery, University of Birmingham

As the food supply of Great Britain has been curtailed on account of the diminished imports from other parts of the world, and it must be remembered that two-thirds of our food supply have hitherto been from overseas, some of the essential elements in diet may be missing or gravely diminished in quantity and this may lead to a deterioration of health unless steps are taken to rectify the deficiency.

There is considerable evidence in recent literature to point to vitamin C as being useful, if not a vital necessity, in the treatment of gingivitis.

How to make available more of this ascorbic

acid in the diet, under present conditions, so that the population at large will benefit is, it seems, a problem that might be given more consideration. The only obvious way appears to be in the wider and correct use of the potato.

If the full vitamin C content is to be entirely utilized then it is necessary that care should be taken in the preparation of the potato for eating.

Many vegetables and fruits contain an enzyme which, when liberated from the plant cells, greatly hastens the destruction of ascorbic acid. This loss is accelerated still more when sodium bicarbonate is added, and also in the presence of oxygen. When the potato is cooked in the skin or by a quick rise in temperature the loss of vitamin C amounts to only 10 per cent. But if the potato is peeled and slowly boiled then there is a loss of vitamin C amounting to 25 per cent or more. In this latter instance the ascorbic acid has passed by diffusion into the water, so that if the water be utilized then little of the value is lost.

According to the League of Nations Health Organization adult man requires, on the average, at least 50 mg. (1,000 International Units) of ascorbic acid. The mean daily dose exerting an antiscorbutic action, is a few milligrams. The mean daily dose ensuring normal capillary resistance is 30 mg.

The number of milligrams of vitamin C per ounce of properly cooked potato is 3 to 5 and, as stated above, 3 ounces of baked potato will yield 210 units of vitamin C.

It may be seen then that if the consumption of the potato can be increased adequate vitamin C may be easily obtained.

The above remarks are intended to bring to the notice of the dental profession the possibilities of the potato supplying, in part, the essential vitamin C, the lack of which is becoming evident intra-orally, with the increase of gingival disease.—*Br. D. Jour.*, June 3, 1941.

Shortage of Dentists

(Excerpt from Presidential Address given by J. B. Parfitt, M.R.C.S. Eng., L.R.C.P. Lond., L.D.S. Eng., August 1, 1941).

In one district I have reason to think that one dentist has to meet the needs of from

ten to fifteen thousand people; these figures may be usefully compared with the figures of one to three thousand for the whole country, and one to one thousand approximately for certain fashionable urban districts; not the least of the difficulties is provision of efficient dental treatment for evacuated school children!

A Munificent Bequest

The Benevolent Fund of the British Dental Association is to receive a sum of £5,000, free of legacy duty, under the will of the late Richard Edwards, of Liverpool. Richard Edwards did much in his lifetime for the younger generation of dentists and now by his will he has made it possible for others to do as much, in another way, to assist those who may fall by the way.—*Br. D. Journal*, August 1, 1941.

A Mobile Dental Clinic for Cornwall

The Education Committee of Cornwall has accepted an offer by Lord Astor, Lord Mayor of Plymouth, to provide a fully equipped and staffed mobile dental clinic for the use of Plymouth evacuees and the children of the county. The money to provide the clinic came from voluntary funds sent to Lord Astor from America.—*Br. D. Journal*, August 1, 1941.

Air-raid Warning for Denture Wearers

"Look after your false teeth. Don't leave them under the pillow or in the bathroom if there is a raid." This injunction has been issued by the Scunthorpe Controller (Alderman H. V. Tombs) to householders in his area. Alderman Tombs said that recent experience showed that many people had lost their dentures through forgetting them, and could not eat the solid foods offered them by the welfare services.—*D. Mag. & Oral Topics*, May-June, 1941.

AUSTRALIA:

Australian Dental Association

VICTORIAN BRANCH

It was decided at the July 8 meeting of the above Association to give £50 to the Ivory Cross National Dental Aid Society, England.—*Australian Jour. of D.*, August, 1941.

GENERAL NEWS

Announcement

Second Edition of "Dental Caries"

A second edition of "Dental Caries," now in press, will be ready for distribution early in September. The *first edition*, issued two years ago, presented summaries of findings and conclusions on the causes and control of caries by 195 authors or groups of authors in twenty-five countries, and contained 189 pages. The *second edition* will present not only revisions of many of the summaries in the first edition—the rest remaining unchanged—but also summaries by 42 additional authors or groups of authors in twelve countries, and will contain 280 pages. These volumes present the realities in accumulated knowledge bearing on the causes and control of caries; afford opportunity for close study of the situation by every practitioner who wishes to ascertain the strength or weakness of current theories or procedures; and indicate need for further research in many relationships. This volume has been compiled by the Advisory Committee on Research in Dental Caries for the Research Commission of the American Dental Association to promote understanding, clinical observation, and research in this field. Copies, bound in cloth, may be obtained at the headquarters of the American Dental Association, 212 East Superior Street, Chicago, Illinois. First edition (1939), \$1.00. Second edition (1941), \$2.00.

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Manual on Dental Care and Internship in Hospitals

The Committee on Dental Care and Internships in Hospitals is composed of Thomas L. Marsh, D.D.S., of Toronto, General Chairman; Ralph G. Harris, D.D.S., of Toronto, General Secretary; Representatives of the American Dental Association, Canadian Dental Association, American Association of Dental Schools, Council on Professional Practice of American Hospital Association, and Members at Large; also Committee on Dental Formulary and Chairmen of Regional Committees in the various provinces of Canada.

As the result of an exhaustive study of the subject of dental care in hospitals this General Committee has published a Manual of 60 pages which should prove of inestimable value to those interested in the dental aspect

of hospital service and which should make for a better understanding between the medical and dental professions.

This Manual outlines the value of a dental department in a hospital and points out that a hospital might reasonably expect its Dental Department to make contributions in the fields of diagnosis, treatment, prevention, public health education, research and economics. Standards of service are discussed and it is concluded that the standard that should prevail in dental services in hospitals is that which provides an adequate, efficient and economical service according to the hospital's individual needs and comparable to that rendered in its other services.

It is stated that the scope of an ideal service would be one such as the following:—

1. On admission to the Dental Department, the clinical classification of the patient is ascertained.
2. Complete clinical examination, with radiographic study where indicated, the full report on the oral condition to become a part of the patient's general record.
3. Consultation with the referring service and with other services where indicated.
4. All necessary dental service to be completed as soon as possible after admission.
5. All dental service to be followed up at frequent intervals and findings recorded.

The Dental Department should be organized and function as a separate department comparable to other departments. The following titles are those used in the dental service of one of our best organized teaching hospitals:—

1. Director of Dental Services and Attending Dental Surgeon.
2. Attending Exodontist.
3. Attending Periodontist.
4. Attending Prosthodontist.
5. Attending Dental Surgeon.
6. Associate Attending Dental Surgeon.
7. Dental Intern.
8. Dental Consultant to the Department of Radiology.
9. Permanent Staff Nurse.

The following committees are suggested:—

1. Rules and Regulations.
2. Hospital Relations.

3. Charts, Clinical Records, and Special Research Records.

4. Clinical Research.

5. Program.

In order that all members of the staff may know what their particular duties are and that there may be harmony of routine in the functioning of the service, the following rules and regulations are suggested:—

1. The Director of Dental Services shall be consulted on all matters other than routine procedure.

2. All patients admitted to the hospital shall receive dental examination as soon as possible after admission.

3. All accidents in operating, untoward sequelae, conditions requiring major oral surgery and all other conditions of rare occurrence or of special pathological interest, shall be reported to the Director.

4. All requests for consultation from other services in the hospital shall be transmitted to the Director who shall decide upon the course of action to be taken.

5. All cases shall be charted on special dental forms. Medical diagnosis, dental diagnosis, treatment and post-operative results shall be clearly shown. These forms will provide statistics so necessary in evaluating the services rendered, especially in regard to the problem of oral focal infection.

6. All patients admitted for treatment are required to sign a "consent to operation" form for any operation other than simple extraction. In the case of a minor, the signing of a permit for any operation by a parent or guardian shall be compulsory.

7. All patients presenting with a fracture of the mandible or maxilla shall be admitted and have complete skull radiograph taken as soon as possible. A member of the surgical staff shall be called in as consultant. Special diet and instruction in oral hygiene shall be carefully explained to, or ordered for, the patient.

8. All gold crowns, bridges, inlays, etc., shall be returned to the patient immediately upon removal.

9. A staff member shall not accept any fee or remuneration nor shall he attempt to induce patients to come to his private office for treatment.

10. In the case of ward patients, no treat-

ment shall be undertaken without the consent of the physician in charge.

11. Patients attending the Pre-Natal Clinic shall receive a most comprehensive diagnosis. Pulpless and infected teeth shall be removed and the mouth placed in a healthy condition, with due regard to the patient's condition. In co-operation with the medical and obstetrical services, the patient shall be given instruction in oral hygiene and diet as it concerns the dental tissues.

12. Patients presenting themselves with oral manifestations of systemic diseases, or with a lesion of unknown origin, shall be referred to the medical service for consultation.

13. Out-patients presenting themselves for dental treatment, who it is felt can afford to retain the services of a private dentist, shall be referred to the Social Service for further interrogation.

The duties of the dental intern are outlined as follows:—

1. To recognize as variations from normal all abnormalities and diseased conditions in the oral cavity and associated parts requiring surgical treatment and to make a complete diagnosis of those diseases and disorders usually treated by the dentist in his private practice.

2. To correlate surgical and other types of dental health service.

3. To differentiate the indications and contra-indications for surgical intervention of the more common abnormalities and diseases involving the oral cavity.

4. To prevent and deal with shock occurring during or following such dental and surgical operations as a general practitioner of dentistry performs.

5. To extract teeth, including unerupted and impacted teeth, with the exception of complicated cases.

6. To treat the following conditions by surgical methods:—

a. Haemorrhage associated with the extraction of teeth and minor wounds occurring in the mouth.

b. Minor abnormalities of the oral cavity, such as irregular or excessive alveolar process, exostosis, and torus palatinus.

c. Acute infections and inflammatory conditions arising about the teeth, including

periostitis and osteomyelitis, with the exception of complicated cases.

d. Chronic periapical infections and their sequelae.

e. Diagnosis of infections of the maxillary sinus of dental origin, with the exception of complicated cases.

f. Uncomplicated wounds and injuries of the soft tissues of the oral cavity.

g. Root fragments and foreign bodies about the alveolar process.

h. The usual injuries to the teeth and alveolar process.

i. Fractures of the maxillae and mandible.

j. Uncomplicated dislocation, subluxation, and other minor disturbances of the temporo-mandibular articulation.

k. Simple benign tumours and cysts of the jaws not requiring major resection of the bone.

l. Minor salivary duct calculus.

7. To carry out post-operative treatment for the conditions hereinbefore mentioned, unless complications should arise, in which instance he would seek consultation with the Oral or General Surgeon, if it should be a case that the attending dentist was not qualified to render the necessary aid.

8. To advise patients regarding the need for treatment and to co-operate with the proper specialist in the surgical treatment of the following conditions:—

a. Special infections such as actinomycosis, syphilis, blastomycosis and noma.

b. Acute infections of the floor of the mouth and neck.

c. Extensive injuries to the bones and soft tissues of the face.

d. Major disturbances of the temporo-mandibular articulation.

e. Congenital cleft of the lip and palate.

f. Major deformities and acquired dental defects of the face and jaws.

g. Malignant tumours and other tumours and cysts requiring extensive operation.

h. Pre-cancerous lesions in the oral cavity.

i. Mucous cysts of the floor of the mouth, lips and cheeks.

j. Major affections of the salivary glands and ducts.

k. Affections of the nerves of the face.

The planning of space, equipment, location, etc., is discussed; also in-patient service, inter-relationship of departments, the relation-

ship of dental faculties to hospitals, records, charts, consultation, oral history, dental terminology and research.

There is a chapter on Formulary and on Approved Drugs of great value to every practising dentist.

The Committee is to be congratulated upon the very comprehensive and valuable nature of this Report.

Appleton Pennsylvania Dental Dean

The appointment of Dr. Joseph L. T. Appleton as Dean of the School of Dentistry of the University of Pennsylvania has been announced by Dr. Thomas S. Gates, President of the University of Pennsylvania. — *N.Y. Journal of Dentistry*, September, 1941.

Kansas City-Western Merged with U. of Kansas City

On July 5 the University of Kansas City and the Kansas City-Western Dental College merged to become the School of Dentistry of the University of Kansas City. — *A.D.A. Release*.

Dr. Percy Howe Honoured

Harvard University has bestowed its LL.D. *honoris causa* on Dr. Percy Howe, of Boston. Dr. Howe is Professor of Dental Science, Emeritus, of the Harvard Dental School and is well known throughout Canada.

Uncle Sam Wants Hygienists

Recent examinations to fill dental hygienists' vacancies in the Federal government service left many posts still unfilled. The Civil Service Commission last month announced another examination on an "open continuous basis" to fill vacancies in hospitals, clinics and relief stations. Applicants must be registered graduate dental hygienists with two years experience. Salary, \$1,620 per year. — *Dental Survey*, September, 1941.

American Dental Association Scientific and Health Exhibits

The Scientific and Health Exhibits in the new Sam Houston Coliseum promise to present a tabloid of "dentistry in progress". Among the timely and authoritative exhibits we can mention only a few: The Army Medical

Museum's, "Activities of the Army Dental Corps"; The U.S. Public Health Service's, "Dental Activities of the U.S. Public Health Service"; V. H. Kazanjian's "Surgical and Prosthetic Restorations of the Face and Jaws"; Dr. George M. Hollenback's "Instruments and Methods Used in Testing Filling Materials". Exhibits from our neighbors in Chile and Argentina will be displayed.

LEO F. MARRE', *Chairman*,
Scientific and Health Exhibit Committee.

Portion of a Letter to The Editor of the Canadian Public Health Journal

An interesting analysis of the report of the National Committee for Mental Hygiene (Division on Public Health and Medical Services) entitled "Study of the Distribution of Medical Care and Public Health Services in Canada," has been written by the distinguished journalist, R. S. Lambert, under the title "How Healthy is Canada?"* It is worthy of being carefully studied by every physician in Canada.

The following points are emphasized in Mr. Lambert's analysis.

(1) There is a general shortage of doctors, nurses and dentists in the Dominion. According to the standard set by the United States Committee on the Costs of Medical Care, there should be one doctor for every 700-750 people. Canada does not measure up to this standard. She has, on the average, one doctor for every 1034 inhabitants, and one dentist for every 2566 persons—a shortage of 4679 doctors and 6323 dentists.

(2) A highly uneven distribution of medical services exists in Canada. For example,

*Published by the Canadian Association for Adult Education, Toronto, in its "Food for Thought Series," No. 6,—Canadian Public Health Association: 7/41, P. 380.

28 per cent of the population of the Dominion (in cities of 30,000 or over) are served by 45 per cent of the doctors, 48 per cent of the nurses, and 49 per cent of the dentists.

(3) There is a much too high maternal mortality in Canada. As late as 1936, out of 26 leading countries, Canada had the fifth highest loss of mothers.

(4) Canada's infant mortality rate is the highest among all the white peoples of the British Empire.

(5) Public health expenditure in Canada is much too low. Out of 193 millions spent on health services in the Dominion, only 12 millions (or 6 per cent) were spent on public health and sanitation.

These are plain facts and must be faced sooner or later, by all of us.

Congress of Anaesthetists

The twentieth annual Congress of Anaesthetists will be held in Boston, Mass., November 3-7, 1941 (Clinical Congress of Surgeons' Week) at the Bradford Hotel. The dental program will be held on Thursday, November 6. There will be clinics on exodontia with nitrous oxide and ethyl chloride anaesthesia at the Forsyth Dental Infirmary and the Cambridge City Hospital. The Massachusetts Dental Society in joint session will present a symposium on the "Diagnosis and Treatment of Acute Infections of the Jaws" in the afternoon at the Bradford Hotel. The evening scientific session will consist of the presentation and discussion of papers relating to local and general anaesthesia for dental surgery. Members of the dental and medical professions are cordially invited to attend.

JOSEPH A. DOHERTY, *Chairman*,
419 Boylston Street, Boston, Mass.

IN MEMORIAM

Herbert Walter Wright, of Calgary, Alberta, aged 50, died at his home May 12, following a brief illness.

Dr. Wright was born at Russel, Manitoba, and was graduated in 1912 from the Chicago Dental College. Since that time

he has practised his profession in Calgary.

He was a member of the Al Azhar Temple Shrine, and Zetland Lodge A.F. and A.M.

Dr. Wright is survived by his widow, his mother, two brothers and two sisters.

... SECTION FRANÇAISE ...

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Le Docteur Augustin Graton *

La mort, sans avertir, vient encore de faucher dans nos rangs. Ses coups sont toujours douloureux; mais cette fois, ce n'est pas seulement une famille qu'ils atteignent, c'est un groupe considérable de confrères et d'amis. Jeudi soir dernier, le 25, il acceptait de son estimé frère, le docteur Doris Graton, l'invitation d'aller passer la soirée chez un autre de leurs frères à Ste-Thérèse de Blainville, leur paroisse natale. Le voyage se fait dans la gaieté, mais à peine rendu, une fatigue subite, rien ne semble sérieux, mais par prudence on appelle un médecin qui vient tout de suite. Il ne voit rien de grave, mais, prend quand même certaines précautions tout en badinant et la conversation reprend, convaincus qu'ils étaient tous d'une inutile alerte.

Tout à coup une faiblesse, un effort et tout est fini. Aucune science humaine ne pourra plus nous ramener celui que la Divine Providence est venue chercher.

Consternés, nous ne pouvons que prier et pleurer. Si nous avions la foi suffisante, nous devrions, comme St-Grégoire de Nazianze devant la dépouille mortelle de son frère, entonner des cantiques d'allégresse, car partir, après une telle vie, n'est-ce pas la certitude de s'en aller vers un monde meilleur.

Une curieuse coutume existe chez nous, d'attribuer à certains morts toutes les vertus qu'ils n'ont jamais pratiquées, le silence en certains cas, serait moins accusateur. Mais cette fois, ne serions nous pas coupables de nous taire. Aussi, je voudrais dire à tous mes confrères, quel noble sujet la profession vient de perdre, mais dans cette note forcément trop brève, je me limiterai à répéter avec tous, que le docteur Graton fut, pour ses amis et ses confrères, le modèle du chrétien convaincu, vertueux jusqu'au scrupule, du père de famille, aimant, dévoué jusqu'au sacrifice, du praticien intègre, compétent et charitable pour l'amour de Dieu.

* Décédé le 25 septembre à l'âge de 52 ans.

Quand il y a 5 ans, mourut son admirable épouse, il répétait dans sa profonde douleur: "Si le bon Dieu n'a pas voulu me la laisser, quels remerciements ne Lui dois-je pas de me l'avoir prêtée". Si à notre tour nous sommes affligés de l'avoir perdu, nous sommes fiers de l'avoir connu et de l'avoir aimé, aussi suis-je certain de l'approbation unanime de tous en offrant à sa famille les plus vives condoléances de notre Journal et de toute la profession.

DR A. THIBAUDEAU

Les Fractures de la Tubérosité Maxillaire au Cours de l'Extraction de la Deuxième ou de la Troisième Molaire Supérieure

par GERARD DE MONTIGNY, B.A., D.D.S., M.S.D.

Plusieurs fois, il m'est arrivé d'être appelé d'urgence par de jeunes confrères ou des étudiants, qui s'apercevaient avec effroi, qu'en voulant extraire une 3^{ème} ou même une 2^{ème} molaire supérieure, un gros fragment osseux avait été mobilisé avec la dent. Une rapide enquête permettait de vérifier d'abord qu'aucune manoeuvre brutale, qu'aucune maladresse ne pouvait être reprochée à l'opérateur. Il avait agi comme à l'accoutumée et c'était sans effort anormal de luxation que la fracture de la tubérosité s'était produite. La dent à extraire, dent de sagesse ou dent de douze ans, était sans anomalie et ne paraissait pas présenter de difficultés spéciales d'avulsion, rien au préalable n'avait donc permis de prévoir la fragilité osseuse.

Ensuite en examinant le patient, on pouvait constater en général que:

a) La muqueuse avait une déchirure, le plus souvent palatine, déchirure apparue secondairement, alors que la fracture s'était déjà produite.

b) Un fragment osseux plus ou moins volumineux était mobile et suivait les mouvements imprimés à la dent. Si la dent à extraire était la dent de sagesse, le fragment comprenait toute la partie postérieure de la tubérosité, le trait de fracture passant par la partie postérieure de l'alvéole de la dent de 12 ans. Quand c'était sur la dent de 12 ans que l'extraction avait été entreprise, le fragment était plus étendu encore; il comprenait toute la tubérosité avec les deux dernières molaires et leurs alvéoles (la dent de sagesse n'étant généralement pas encore complètement évoluée). Vers le haut, le trait de fracture passait par les apex ou même au dessus d'eux.

c) Une hémorragie d'importance variable peut accompagner ces désordres osseux: hémorragie d'ailleurs jamais inquiétante et parfois même nulle (grâce sans doute à l'épinéphrine mêlée à l'anesthésique local).

Quand elle existe, elle peut être uniquement buccale, ou bien être à la fois buccale et nasale.

CONDUITE A TENIR

Achever l'intervention, c'est-à-dire "extraire la dent et le fragment osseux", incapable de se consolider et voué à l'infection, à la séquestration s'il était laissé en place. Mais s'il faut extraire la tubérosité fracturée avec la dent ou les dents qu'elle porte, il faut avoir grand soin de respecter toute la muqueuse gingivale, vestibulaire et palatine, qui le recouvre. On prépare donc un bistouri, une rugine et en outre un matériel de suture (aiguille, crin ou fil de soie).

On décolle d'abord attentivement la muqueuse de l'os, cela au bistouri et à la rugine, sur toute la hauteur du fragment osseux détaché, en prenant soin de ne pas créer de nouvelles déchirures de la muqueuse.

Ce temps un peu délicat bien exécuté, la portion de tubérosité fracturée ne tient plus à rien et tombe d'elle-même avec la dent ou les dents qui y sont implantées. A ce moment, il est facile de se rendre compte que le sinus maxillaire a perdu son plancher (si la muqueuse sinusienne est déchirée, il y a hémorrhagie nasale, mais cette déchirure n'est pas fatale).

Il ne reste plus qu'à suturer d'abord la déchirure muqueuse palatine ou vestibulaire, si elle existe, et ensuite à rapprocher les deux lèvres du bord libre de la gencive; un ou deux points suffisent.

Pendant les jours suivants, on se contentera de faire de l'antiseptie buccale; on enlèvera les sutures au 4ième jour, si elles ne sont pas déjà tombées spontanément. La guérison survient habituellement sans complication.

PATHOGENIE DE LA FRACTURE DE LA TUBEROSITE—RESPONSABILITE DE L'OPERATEUR

Dans les cas qu'il m'a été donné de voir, la fracture de la tubérosité s'était faite sans qu'il y ait eu faute de l'opérateur. Il faut donc retenir que cette fracture peut parfaitement survenir sans manoeuvre brutale ou maladroite. Quelle est donc alors la cause de l'accident?

Il est très certainement dû à une disposition anatomique particulière: le patient est un sujet dont le sinus maxillaire est très développé et descend jusqu'aux apex des dernières molaires et même jusqu'entre les racines de ces dents. D'autre part, les parois, externe, postérieure et interne du sinus sont d'une minceur et d'une fragilité anormales; en certains points ces parois sont fines comme une coquille d'oeuf. La fracture s'explique donc par le manque de résistance de l'os et non par des anomalies radiculaires ou des adhérences exceptionnelles des racines à l'alvéole qui n'existent pas. Il est si vrai que la disposition anatomique de l'os conditionne la fracture que le Dr Adolph Berger a pu rapporter l'histoire d'un malade à qui le même opérateur avait fracturé les deux tubérosités maxillaires; et cependant, lors de la seconde intervention, instruit par la première expérience, il avait prévu la possibilité de la fracture et pris toutes mesures pour essayer de l'éviter.

Enfin parmi les conditions favorisantes de la fracture lors de l'extraction de la dent de 12 ans, on peut retenir aussi la présence d'une dent de sagesse encore en évolution. La congestion osseuse qui accompagne la poussée dentaire rend certainement l'os plus fragile.

Reste à savoir si l'on peut prévoir la fracture de la tubérosité et quelles mesures on peut prendre pour éviter de la produire. La prévoir avec certitude est impossible, sauf dans le cas où on aurait à opérer un sujet ayant déjà eu cet accident, comme le cas cité par Berger; mais il est bon de penser toujours à la possibilité du détachement de la tubérosité maxillaire quand on extrait une dent de sagesse ou même une 2ième molaire supérieure.

Si la radio a montré un grand sinus, on sera très attentif à éviter toute manoeuvre un peu brutale du davier; parfois on pourra d'emblée procéder à la séparation des racines.

On peut prévoir, parfois, cette éventualité, quand une dent de sagesse, de volume exagéré, est restée isolée, dans la région molaire du maxillaire, depuis de nombreuses années; une résorption osseuse s'est effectuée dans le procès alvéolaire des dents de 6 ans et de 12 ans et a laissé le procès alvéolaire de la 3ième molaire intact, dans sa solidité et son épaisseur.

Aussi, il est possible d'envisager cet accident, quand nous avons à pratiquer l'avulsion d'une molaire supérieure (2ième ou 3ième) dont la pulpe a été enlevée depuis plusieurs années ou dont l'alvéole a subi une calcification exagérée, due à un processus inflammatoire de longue durée.

397 est, Bd St-Joseph, Montréal.

La Section d'Hygiène Dentaire

La section d'hygiène dentaire a été établie en 1915 par suite de la nomination d'un inspecteur dentaire. Le nombre a été porté à quatre en 1928.

Jusqu'en 1932, les activités de cette section ont consisté dans un travail de prophylaxie et d'enseignement par des conférences aux élèves et aux professeurs et dans l'examen dentaire des cas spéciaux référés par les médecins-inspecteurs et les infirmières-visiteuses.

Les activités actuelles de la section de l'hygiène dentaire consistent dans:

I. L'inspection dentaire dans les écoles;

II. les cliniques dentaires municipales;

III. la clinique d'orthodontie.

Son personnel actuel se compose d'un chef en charge de la section dentaire, de six dentistes engagés à temps complet, dont le travail consiste à faire de la clinique et de l'inspection des élèves dans les écoles à certaines heures; d'un dentiste spécialiste en orthodontie à temps partiel. Ils sont aidés dans leur travail par des infirmières et des aides-infirmières.

I. L'INSPECTION DENTAIRE DANS LES ECOLES

Année scolaire 1940-41

Au cours de l'année 1939-1940 un dentiste de langue anglaise a fait les examens des enfants, au point de vue dentaire, et des conférences avec et sans projections lumineuses dans les écoles protestantes et les écoles catholiques de langue anglaise.

Ce travail était fait depuis 1938, jusqu'en juin 1940, dans les écoles dirigées par la Commission des écoles catholiques par un groupe de dentistes engagés à temps partiel par cette Commission.

Au mois d'octobre 1940, le Service de Santé a repris les examens et les conférences dans les écoles.

Les dentistes en charge des cliniques dentaires municipales visitent les écoles de leur district et font l'examen de la bouche des élèves dans les classes. Ils prennent note des défauts dentaires et donnent une causerie sur la prophylaxie et les soins qu'ils doivent recevoir et, s'il y a lieu, ils donnent à chaque enfant un avis qui doit être remis aux parents. Dans les écoles catholiques françaises les dentistes ont visité les classes de 2ème et 3ème année et un certain nombre d'élèves de 4ème.

Le tableau qui suit indique le travail accompli au cours de l'année scolaire 1940-41 dans les écoles catholiques, protestantes et privées.

TABLEAU

Ecoles visitées	246
Elèves dans ces écoles	129022
Visites aux écoles	1033
Nombre de classes visitées et de conférences aux élèves	1060.
Présences aux conférences	34619
<i>Examens</i>	
Elèves examinés (classes de 2e, 3e et 4e année)	32583
Elèves porteurs de défauts dentaires nécessitant un traitement:	
a) carie	25863—78.4%
b) prophylaxie	28427—87.2%
Cas normaux	6720
Nombre de dents cariées	98878
Avis aux parents	21669

Note: 78.4% des enfants examinés ont été trouvés porteurs de défauts dentaires, et, 87.2% ont besoin de soins prophylactiques (nettoyage. . .).

II. LES CLINIQUES DENTAIRES MUNICIPALES

Le nombre des cliniques dentaires municipales est de cinq. Le travail de ces cliniques consiste à faire les traitements de prophylaxie, l'extraction et l'obturation des dents. On ne reçoit que les enfants indigents d'âge préscolaire et les écoliers pauvres. Lorsque l'enfant est examiné à la clinique, nous donnons aux parents qui assistent à l'examen, les conseils appropriés à l'état de santé de sa bouche. Ceci nous a amené plus de coopération et a donné de meilleurs résultats.

Rapport des cliniques dentaires municipales pour l'année 1940

Nombre d'enfants traités	17198
Traitements: extractions	9964
prophylaxies	6000
obturations	2400
pansements	4193
Total	22336
Nombre de dents extraites	30763
Nombre de dents obturées	1972
Nombre de cas finis	650

Nous devons noter que l'association "Junior Red Cross" et la "Junior League" au "Griffintown Club" ont fait, en collaboration avec le service de santé, de l'obturation dans un groupe d'écoles de la commission scolaire protestante et qu'un dentiste de langue française de la "Croix Rouge" a donné des soins à quelques élèves des écoles catholiques françaises de Montréal.

III. LA CLINIQUE D'ORTHODONTIE

Une importante amélioration à noter est l'organisation d'une clinique dentaire d'orthodontie. Le directeur du service de santé et les administrateurs de la cité désirant voir grandir à Montréal les oeuvres d'hygiène mirent en opération cette clinique. Grâce à une entente intervenue entre la faculté dentaire de l'université et le directeur du service de santé, cette clinique fut ouverte à l'école dentaire même située au numéro 1570 rue St-Hubert, le 12 février 1940. Elle est sous la direction du professeur titulaire de l'enseignement de l'orthodontie à la faculté dentaire le Dr Paul Geoffrion, qui fut engagé à temps partiel par la ville comme chef de cette clinique. Il est secondé dans son travail par une technicienne en orthodontie.

Cette clinique a pour but de venir en aide aux parents moins fortunés qui peuvent y faire traiter leurs enfants souffrant de malocclusion dentaire ou de toute autre difformité de la face, et aussi de prévenir ces défauts avant qu'il soit trop tard. Après quelques mois d'opération 110 enfants portant des appareils de redressement fréquenteront la clinique d'orthodontie pour la plupart pendant au moins trois ans. La demande d'inscription est tellement grande que nous avons dans nos registres des rendez-vous pour septembre 1942.

Rapport indiquant le travail accompli à la clinique d'orthodontie pour l'année 1940

Nombre d'enfants sous traitement	110
Photographies-anthropométriques	96
Radiographies	460
Ablations du frein	2
Empreintes	176
Diagnostics et plans	200
Poses d'appareils	112
Ajustements	404
Autres traitements	6971
Total des traitements	8421

Docteur R.-R. Lalonde, L.C.D., Chef de la Section Dentaire

Les Resines Acryliques en Dentisterie Opératoire

par LAMAR W. HARRIS, D.D.S.

Donnée au congrès de Québec, le 6 juin 1941

Il devient chaque jour plus évident que les substances plastiques auront leur place. Les qualités qui ont rendu le méthacrylate de méthyle fort utile pour la base des dentiers font espérer ses grandes possibilités en dentisterie.

La principale de ces qualités, c'est la stabilité de sa couleur. Le méthacrylate par lui-même est clair et demeure clair malgré tout, de sorte que des colorants permanents y conserveront leur couleur. Les autres substances plastiques ont une tendance à reprendre leur couleur naturelle ambre, ce qui explique pourquoi nos vieux dentiers perdaient leur couleur.

A cette première qualité s'ajoute une résistance et une solidité qui semblent suffisantes pour qu'on puisse s'en servir sans crainte de fracture.

On a soulevé comme un drapeau rouge de danger sa capacité d'absorber l'eau. Or, il n'y a pas lieu de craindre ce défaut, car cette propriété équivaut à moins d'une demie de un pour cent et par osmose. C'est en vingt-quatre heures que le maximum d'absorption est atteint et il demeure constant. Nous prenons la précaution de conserver toute restauration dans l'eau pour ne la laisser sécher qu'au moment de la cimenter.

Sa qualité particulière de rebondissement en est une des plus désirables. L'épreuve du sablage à air comprimé prouve qu'une plaque de verre est complètement percée par le sable quand le méthacrylate est à peine finement gravé. Cela devrait alors diminuer le choc de la dent qui vient en contact avec la restauration dans la bouche.

Un fait qu'en tout temps on doit avoir présent à l'esprit, c'est que toute restauration faite de substance plastique est juste aussi parfaite que la fondation qui la supporte. On ne peut bâtir sa maison sur le sable et s'attendre à ce qu'elle résiste aux tempêtes, ainsi on ne peut placer une restauration en substance plastique sur une dent pauvrement préparée et exiger qu'elle résiste aux forces de la mastication et aux conditions de la bouche. Les substances plastiques ne sont ni de toute sécurité ni une panacée pour tous les maux de la bouche. Nous ne pouvons vous recommander trop fortement un examen et un diagnostic sérieux avant d'installer une restauration. Nous devons y aller lentement jusqu'à ce que les années nous aient fourni les renseignements dont nous avons besoin sur sa durée.

Nous pouvons rapporter dès maintenant qu'il n'y a pas encore de signes d'usure rapide ni d'assombrissement du lustre de plus d'un millier de restaurations plastiques que nous avons placées en bouche depuis trois ans. L'usure est moindre que celle d'une porcelaine ou de celle d'une dent.

Nous cherchons encore des améliorations de la technique de ceux qui se servent de ces substances, mais nous exposerons ici les différentes phases de la méthode que nous avons trouvée la plus heureuse jusqu'ici.

La couronne complète (Jacket Crown).

La préparation doit être bien définie avec un bon épaulement, comme pour la coiffe de porcelaine.

Un tube de cuivre; une impression en composition (ou toute autre méthode de précision) et une impression en plâtre des dents avoisinantes. De la cire

bleue placée sur la racine préparée et les dents voisines fournira un siège bien défini pour le modèle coulé en pierre.

On prépare un modèle de pierre dans l'impression du tube de cuivre. Ce sera le maître modèle ou le modèle record. De ce modèle, avec un tube un peu plus large pour qu'il embrasse bien l'épaule, on prend une seconde impression.

On attache cette seconde bande à la cathode d'un appareil à plaquer en cuivre. Au dessus de l'épaule il ne doit y avoir d'exposée qu'une fine ligne de cuivre. Nettoyez soigneusement avec une solution saturée de (gold dust), séchez le tout et peignez d'une fine couche de graphite colloïdal. Envelopper la bande d'une fine couche de cire et la placer dans le bain électrolyseur assez longtemps pour obtenir un placage moyen. Couler cette impression en pierre et après séparation, faire le nettoyage de la surface de cuivre au Bon Ami et des petites coupes à polir.

L'impression en plâtre avec son modèle record a été transformée en un modèle complet et sert maintenant à préparer une couronne en cire de la forme désirée. Cette couronne de cire à laquelle on a ajouté ses points de contact, est transportée sur le modèle plaqué en cuivre. Le tout est investi dans la moitié inférieure d'un petit moufle à compensation, le modèle de cire en haut. La cire est enveloppée d'étain fin (.002) en rabattant les joints et la bande incisive sur la face linguale. La moitié supérieure du moufle est alors remplie et l'on ferme. Les deux parties du moufle ne se joindront pas complètement à cause des petites particules de sable qui s'interposeront. Cela aidera à la séparation. Le revêtement employé se prépare comme suit: cinquante pour cent de plâtre à prise rapide, trente-cinq pour cent de pierre blanche et quinze pour cent de sable fin blanc, mesure en volume.

Chauffer le flasque au point où il est encore possible de le tenir dans sa main sans se brûler et ouvrir. Enlever la cire qui est assez chaude pour céder et pas assez pour se répandre dans le revêtement. Servez vous de chloroforme pour enlever toute trace de cire et le cas est prêt à bourrer.

(On se sert de chloroforme seulement quand il n'y a aucun danger d'atteindre une autre pièce en substance déjà finie telle que des dents ou des parties de pont. Quand on doit enlever de la cire autour d'une telle pièce on emploie du Xylol ou on y verse de l'eau bouillante).

Les quantités soigneusement proportionnées sont placées dans différents petits récipients et on y ajoute le liquide dans la proportion de 1cc. par 30 grains de poudre. Cela fera un mélange saturé et non trop fluide. Trop de liquide produira le même effet que l'addition de poudre transparente. Mélangez le tout avec un instrument en acier inoxydable, en verre ou en agate et fermez bien les récipients dont vous ne vous servez pas.

Bourrez d'abord le bord incisif avec le mélange de couleur appropriée en l'amincissant sur la face antérieure en une mince ligne à l'endroit où elle rejoindra la couleur de la masse. Il convient de porter cette ligne un peu plus haut sur les faces mésiale et distale que sur la face labiale. Ensuite, bourrez l'autre couleur avec un excès de vingt pour cent en compensation de la contraction. Maintenant fermez le moufle en introduisant la dent cuivrée dans la substance. L'excès sera considéré suffisant s'il permet de fermer le moufle à deux millimètres près par la seule pression des mains.

Placez dans la presse et portez dans un bain de glycérine déjà à 125° F. En 25 minutes portez à 175° F alors qu'à ce point le moufle pourra être complètement fermé, en mettant le moufle dans une presse et en y appliquant une pression d'environ 140° à 150°. Alors on reporte au bain de glycérine à 175° qu'on élève rapidement à 235° pour le tenir à ce point pendant 20 minutes.

A volonté la presse peut demeurer dans la glycérine jusqu'à refroidissement complet ou être mise sous le robinet. Alors on ouvre le moufle, enlève l'étain, on polit à la meule ou disque et avec les cotons ou les feutres.

La pierre du modèle peut s'enlever avec une fraise, après quoi on pèle le cuivre de l'intérieur.

Servez-vous des ciments les plus fins possible et si la couleur ne vous satisfait pas en bouche, essayez d'autres mélanges de ciment avec de la glycérine. Cette propriété des méthacrylates de réfléchir la lumière, permet l'emploi d'une longue gamme de couleurs pour en arriver à une apparence convenable par la couleur des dents voisines et des poudres de ciment.

Incrustation.

A part les petites incrustations gingivales, toutes peuvent être faites de la même façon en se servant d'un moule en cuivre. L'impression est plaquée en cuivre, coulée en pierre, séparée et polie au Bon Ami. Alors l'incrustation en cire est sculptée directement dans la cavité cuivrée, le modèle investi et étamé. Après l'ouverture du moufle on procède au bourrage comme dans le cas de la coiffe, en renversant les mouvements. On bourre d'abord la couleur de la masse pour finir par la couleur du bord incisif. Les incrustations gingivales ne requièrent généralement qu'une couleur.

Pour les incrustations gingivales trop petites pour être plaquées en cuivre, on se contente d'un modèle de cire pris directement dans la cavité et enfoncé tel que retiré dans une crème de ciment pur et blanc de S. S. White. Servez-vous d'une quantité suffisante pour avoir de la force et recouvrir toutes les marges (huit à dix gouttes de liquide et suffisamment de poudre pour faire une crème épaisse.) Avant de mettre en revêtement, couvrez le dessous du modèle de ciment et ses côtés d'étain, de sorte qu'il ne touche pas le revêtement. On fait autant sur le dessus et l'on suit le même procédé que pour la coiffe.

Couronnes ouvertes (Veneer crowns).

Si les méthacrylates de méthyle ne pouvaient être employés dans d'autres cas que celui-ci, cela vaudrait quand même tout le temps dont on a disposé pour les recherches s'il continue d'être utilisable pour faire des faces aux couronnes en or. Creusez profondément avec rétention la couronne d'or, cirez et mettez en revêtement comme l'incrustation. Après l'ouverture du moufle, bourrez la substance directement dans la cavité d'or et continuez comme pour la coiffe. Vous aurez une surface permanente qui pourra facilement résister à toutes les forces de la mastication sans s'arracher.

Précautions à prendre. Ne pas biseauter les marges qui parfaitement ajustées reflèteraient le ciment et donneraient une pauvre apparence. Faire les queues d'aronde assez grandes pour compenser aux 24000 livres de tension de l'or par les 12000 livres des substances plastiques. Il ne faut pas que les substances plastiques viennent en contact avec les mains ou toute autre partie du corps avant d'être complètement ouvrées, car elles ne sont inertes qu'après la cuisson.

Ainsi va la marche des substances plastiques en dentisterie. Après avoir passé par le moulin à l'argent, tournez le coin en passant par l'affinerie d'or et la porcelaine. Continuez avec des précautions raisonnables à nous assurer des meilleurs matériaux pour chaque restauration de la denture humaine.

Traduction du docteur A. Thibaudeau.

Les Vitamines dans la Médecine Infantile*

par le docteur RINNE

AVANT-PROPOS

Je n'ai pas eu la prétention, en écrivant cet opuscule, de renouveler la face de la terre. J'ai fait de larges emprunts aux cours qui me furent dispensés, voilà déjà quelques années, et que j'ai rajeunis de mes propres observations; à bon nombre de publications spécialisées, car qui pourrait aujourd'hui se vanter de connaître à fond plus d'un secteur de la médecine! Vous ne trouverez donc pas de ces révélations qui vous laissent pantois . . . mais devant lesquelles on regimbe le plus souvent.

Mon but était de mettre dans les mains du public, un guide lui permettant d'élever ses enfants avec le plus de sécurité et de facilité. Je me suis efforcé d'être le plus clair et le plus simple possible. Aussi, ai-je délibérément écarté bien des troubles, peu importants, qui servent uniquement à étoffer le format du livre, et des maladies trop graves pour être traitées sans médecins, ou trop complexes . . . Tout ce qui n'est pas du domaine infantile, a été volontairement éloigné. Je me rappelle un livre, très bien fait d'ailleurs, dont j'ai beaucoup usé au cours de mes études. Quoique dédié à la médecine infantile, il faisait en réalité un tour complet de l'horizon médical, y compris la chirurgie, la dermatologie, et même les cures hydrominérales . . . ! seul, le titre de l'ouvrage rappelait obstinément que l'on ne s'occupait que de pédiatrie.

J'ai voulu attirer l'attention sur un fait important: toute la nutrition, toute la pathologie de la nutrition et même la pathologie tout court, gravitent autour de cette idée maîtresse: la nécessité impérieuse des vitamines à chaque stade de la vie et surtout pendant l'enfance. L'enfant, avec sa fragilité, son métabolisme si actif, sera ce que sa ration journalière de vitamines lui permettra: solide, bien développé, pas de maladies graves, si la ration est bien équilibrée en quantité et en qualité; malingre, pâlot, fragile aux infections, si la carence s'est installée, même fruste . . .

Depuis Pasteur, il semblait que le microbe était tout, que la connaissance des maladies microbiennes était le summum de la médecine. C'était restreindre singulièrement le champ de l'art de guérir, qui exige pourtant une formation si vaste. Cette erreur formidable, de ne considérer que la maladie, c'est-à-dire un accident, et non le malade, c'est-à-dire un tout bien agencé, un petit univers avec son passé, ses réactions propres, sa résistance personnelle, sa faiblesse congénitale ou acquise, dérive du manque de pondération, du choc émotif, si l'on peut dire, qu'ont ressenti ceux qui furent les témoins, voire les acteurs ou collaborateurs de l'épopée pastorianne. La littérature scientifique de cette époque, a été, semble-t-il, traversée d'un souffle poétique qui a fait dépasser la mesure.

Tant que les médecins contemporains de l'ère pastorianne ont vécu, cette littérature fut sans danger, car, habitués à l'ancienne conception, où le malade était tout, les théories nouvelles ne modifièrent que leur thérapeutique, sans retentir nullement sur leur technique d'observation. Une comparaison bien simple vous expliquera leur état d'âme: ils étaient comme des étrangers émigrés dans un nouveau pays. Ils parlent la nouvelle langue, emploient les ressources locales et s'adaptent au nouveau milieu; mais ils continuent à penser dans leur langue originelle. Ils sont toujours imprégnés de leur ancienne patrie.

Il leur restait donc, consciemment ou non, un excellent fond.

Les générations suivantes, au contraire, n'ont reçu que l'enseignement pastorien, et comme de juste, ils l'ont poussé à ses extrêmes limites. Ce fut pour constater bien

* Opinion Dentaire Belge, nov 1938.

des lacunes, bien des impuissances. Aussi la réaction ne s'est pas fait attendre. Des hommes comme Lumière, s'élèvent avec force contre la théorie en question. Ils ont remis en honneur la théorie humorale. C'est l'état des humeurs personnelles qui conditionne le comportement de l'individu vis-à-vis des maladies, et précisément, qu'est-ce que les vitamines? Des éléments qui, à doses infinitésimales, modifient les humeurs du patient, le font réceptif ou réfractaire aux maladies les plus diverses.

Pour terminer sur une note d'humour, disons que la conception pastorienne est, comme celle de Ford, la grande série, les pièces identiques rigoureusement interchangeables, et de ce fait accessibles à la masse. D'où, sa diffusion et son utilité indiscutable. Mais seule, la voiture figolée avec amour, avec une science plus approfondie, plus humaine des nécessités, des habitudes de l'acheteur, tout comme un diagnostic établi en tenant compte de tout le passé, pourra donner toute satisfaction aux plus difficiles et constituer un progrès réel, dont profiteront plus tard, les Fordistes de la route ou de la médecine.

C'est ce que je me suis efforcé de faire au cours de cet exposé.

CHAPITRE I.

Les premiers jours de la vie

L'enfant vient de naître. Il a été débarbouillé, habillé, maillotté plutôt par les soins de la sage-femme. Il dort tranquillement une heure, deux heures. Il pleure un peu. Et, tout de suite, l'un des assistants de dire: Il a déjà faim!! Vous aurez beau dire et beau faire, on revient à la charge; un enfant qui pleure est un enfant qui a faim. Plus prosaïquement, il suffirait de dérouler les langes pour découvrir la cause de ces cris: l'enfant a uriné ou a émis quelques selles, petites selles noirâtres, semblables à des caillots, très peu abondantes. Il suffit de laver à l'eau tiède avec un savon de toilette doux, essuyer avec un vieux linge doux, poudrer au talc et rhabiller, pour que le calme renaisse.

LE PREMIER JOUR:

Faut-il donner à boire le premier jour?

Il ne faut pas donner de lait, mais un peu d'eau pourra être très utile. On peut donner de l'eau bouillie, refroidie, par petites quantités, si l'enfant a soif. On la donne par cuiller à café, ou à la tétine. L'enfant normal bien portant n'a guère de besoins le premier jour. La soif est faible, sauf, bien entendu, si c'est l'été, ou s'il y a dans la chambre une température trop élevée; car alors, la perte d'eau par transpiration cutanée et évaporation pulmonaire est beaucoup plus considérable et peut même dépasser en quantité l'eau émise par miction. Le Professeur Plumier a vu un enfant de deux jours, avec 41°,5 de température; c'était en plein été, dans une petite chambre sous le toit, avec une température d'étuve. La fièvre était due à la soif, et la température a tombé au fur et à mesure que l'on a donné de l'eau et que le corps s'est réhydraté.

Si l'enfant est athrepsique, le pli que l'on fait en pinçant entre deux doigts la peau de l'abdomen, reste après qu'on a levé les doigts. Ces enfants ont beaucoup plus besoin de liquide.

LE SECOND JOUR:

Dès le second jour, il faut mettre au sein. Une maxime, un aphorisme créé par Pinard, dit que: "Le lait de la mère appartient à l'enfant". En effet, rien ne vaut le lait de la mère. Il existe de très grandes différences entre le lait de femme et le lait de vache, de chèvre ou d'ânesse, tant au point de vue énergétique que plastique.

Le lait contient des albumines: lactoglobuline et lactalbumine, de la caséine; des hydrates de carbone (lactose); des graisses complexes, des sels variés: carbonates et phosphates de Ca, une petite quantité de fer, une trace de cuivre et de zinc; des vitamines A, B, C, D plus ou moins abondantes. Ces produits sont très variables

selon la source. Ainsi le lait de femme contient 1,5 à deux fois plus d'hydrates de carbone que le lait de vache; dix fois plus de fer; 1,5 à deux fois plus de graisse; deux à trois fois moins d'albumine; trois fois moins de sels de chaux. Chaque lait est étroitement spécifique de l'espèce qui la fournit. On le constate en faisant une analyse complète, ce qui est très complexe et doit porter sur des quantités déjà importantes afin que la marge d'erreur soit plus faible. C'est ce qui explique que les anciens tableaux, basés sur des analyses portant sur de faibles quantités, soient si différents de ceux que l'on obtient maintenant.

On met aussi en évidence cette spécificité par les moyens biologiques. Un animal sensibilisé avec du lait de vache n'est sensibilisé que pour celui-ci, et non pour des laits de chèvre ou de cobaye. Dans tout lait, on peut distinguer des éléments énergétiques (hydrates de carbone, graisses et albumines) et des matériaux plastiques (albumines et sels). Ceux-ci ont une très grande importance. Il y a un rapport étroit entre la quantité des albumines et sels d'un lait et le temps que met le nouveau-né à doubler son poids de naissance.

Ainsi: l'enfant double son poids en cinq mois; le veau en 47 jours; le lapin en 6 jours; le cobaye en 2 jours, si bien qu'on a dit avec humour que les cobayes naissent adultes.

Le lait de la mère appartient à l'enfant. Des expériences, portant sur une grande quantité de cobayes, ont montré que: des cobayes nourris artificiellement dès le premier jour ont une mortalité de + de 90%.

Si l'alimentation artificielle n'a commencé que le second jour, la mortalité est de 80%. Un seul jour d'alimentation maternelle a déjà suffi à améliorer le taux.

Si l'alimentation maternelle a duré au moins six jours, le chiffre de la mortalité est revenu à la normale.

Il est donc de la plus grande importance de donner le sein à l'enfant, si peu que ce soit. Beaucoup de mères peuvent allaiter jusqu'à six mois. L'enfant est alors déjà suffisamment fort pour se tirer d'affaire. Ne l'eût-il que pendant un mois ou deux que le pronostic serait déjà meilleur.

La nutrition est une question de qualité, mais aussi de quantité. On ne peut évaluer la dose ingurgitée par le nourrisson par la durée de la tétée: celle-ci dépend de trop de facteurs qui faussent le résultat: appétit de l'enfant, énergie à sucer, disposition plus ou moins favorable du bout de sein, réplétion de la mamelle. Il faut peser la tétée, en pesant l'enfant avant et après.

L'enfant doit prendre 40 à 50 gr. par tétée le second jour. La dose totale par jour devra être de 500 gr. après huit jours et 700 gr. au bout d'un mois.

Pendant les huit premiers jours, on peut donner le sein six fois par jour, suivant la méthode classique, au bout de 3 heures.

LA SECONDE SEMAINE:

est la semaine critique. La mère est fatiguée par les suites d'accouchement, voire un certain degré d'infection bénigne, le séjour au lit, et le manque d'exercices, qui retentit et sur le psychisme et sur le péristaltisme intestinal, l'air confiné. Si la sécrétion lactée s'avère insuffisante, ce que l'on constate par les pesées, il faut recourir sans hésiter au biberon pour compléter les tétées. Dans l'alimentation au sein, il n'y a pas à redouter le moindre trouble par excès de nourriture. Cet excès est d'ailleurs exceptionnel et si même il se produisait, l'enfant en serait quitte pour quelques régurgitations de lait. Cela ne pourrait donc pas lui nuire en aucune façon. Ce qu'il faut alors redouter, c'est l'alimentation trop peu copieuse.

Aussi pour mettre l'enfant et la mère dans les meilleures conditions, il vaut mieux ne donner que cinq tétées espacées de quatre heures, si l'enfant est vigoureux et le lait abondant: 6 heures, 10 heures, 2 heures, 6 heures et 10 heures. C'est plus de tranquillité et de temps libre pour la mère, plus de repos pour le nourrisson.

Il y a fréquemment des troubles par sous-alimentation: vomissements, diarrhées, selles petites, fréquentes, muqueuses. Autrefois, on mettait ces troubles sur le compte de la pléthore, et l'on mettait à la diète hydrique, c'est-à-dire suppression complète du lait pendant une ou deux tétées, voire même une journée, et l'on s'étonnait que l'état ne s'améliorât guère ou même pas du tout. On ne faisait qu'augmenter le déficit. Les chiffres anciens pour la ration que l'on trouve dans tous les livres, sont trop faibles. Pendant le premier trimestre, l'enfant doit boire le sixième de son poids par jour. Pendant le second trimestre, l'enfant boira le septième de son poids. Certains enfants, particulièrement en retard à la naissance, peuvent prendre sans inconvénient jusqu'à un cinquième, et même certains prématurés près du quart de leur poids. Mais ce sont des enfants qui doivent être soignés dans une clinique infantile, afin que la ration soit toujours exactement et minutieusement dosée et administrée scrupuleusement. Ces prématurés ou athrepsiques doivent recevoir du lait de nourrice mercenaire. Toute clinique pédiatrique compte maintenant quelques nourrices mercenaires (4 à la clinique universitaire de Liège). On leur fait tirer le lait manuellement, puis elles donnent le sein à leur propre enfant, pour entretenir la sécrétion. Avec un peu d'habitude, on peut arriver à récupérer ainsi 400 à 500 gr. de lait que l'on répartit entre les enfants qui en ont le plus besoin.

CHAPITRE II.

Alimentations artificielles

Elles sont légion. Chaque clinique, chaque médecin en a qui lui donnent toute satisfaction, auxquelles il rapporte tout le succès. Cela provient de ce que 80% des enfants progressent avec n'importe quel régime. Voilà de quoi nous rendre plus modestes!

Tous ces régimes ne sont d'ailleurs très souvent différents, qu'en apparence. Ils gravitent tous, autour d'un petit nombre d'idées maîtresses, qu'il importe de bien mettre en évidence; de cette façon, on pourra, le cas échéant, si tel ou tel produit fait défaut, le remplacer par un homologue équivalent.

Dans les classes pauvres, 80% des enfants de moins d'un an font du rachitisme. Roehmer va même jusqu'à 90% dans les grands centres. Il y a de l'anémie, de l'hypertrophie du foie, de légères déformations osseuses, des fontanelles trop grandes. L'anémie provient de ce que le lait de femme est très pauvre en fer: 1 ctg. par litre. Le lait de vache en contient dix fois moins encore. Le fer et le cuivre sont absolument nécessaires à l'édification de nouveaux globules pour remplacer ceux qui se détruisent continuellement. Il en est de même pour le zinc, qui avec le cuivre, joue le rôle de catalyseur dans la formation de l'hémoglobine. L'apport de fer est trop faible pour faire face aux besoins intenses de l'organisme. La nature, qui fait bien les choses, a pris ses précautions: l'enfant naît pléthorique, c'est-à-dire, avec une hyperglobulie rouge très marquée. Les globules en excès sont détruits dans les premiers jours, libérant leur hémoglobine dont les produits de désintégration donnent à la peau du nouveau-né, la teinte ictérique de la première semaine. Ces pigments ferriques sont accumulés dans le foie, où ils rejoignent la réserve de la naissance. On a mis en évidence cette réserve et la façon dont elle supplée à la carence alimentaire par l'expérience suivante. On prend une portée de lapins ou de cobayes, portée abondante comme on sait. On sacrifie un animal le premier jour et on dose le fer hépatique. Un second animal est sacrifié le second jour et on dose le fer, et ainsi de jour en jour. On s'aperçoit que l'importance de la réserve décroît de jour en jour. Cette réserve chez l'homme dure environ six mois; c'est juste suffisant. A ce moment, l'enfant commence à porter les objets à la bouche; il va pouvoir prendre des légumes et ainsi fixer du fer étranger. Le lait de vache contient, je le répète, dix fois moins de fer que celui de femme. Les laits de chèvre et d'ânesse n'ont plus actuellement d'importance pratique, car ils donnent une anémie encore plus considérable.

(à suivre)



A photograph of the Editor of the Journal of the Canadian Dental Association taken from the Banff Springs Hotel, looking down the Bow Valley, taken by Dr. Henry A. Thompson, President of the Dental Company of Canada, Limited.



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Some Phases in Dental Economics*

by KENNETH M. JOHNSON, D.D.S., Winnipeg, Manitoba

DEALING with the wide subject of economics in the short time at my disposal I am limited to the discussion of certain phases of this great question which it was felt would prove most beneficial to my listeners. Our profession might well be likened to a guild in which it is the duty of each member to help his fellow members whenever and wherever he can, therefore I have gladly accepted your invitation to discuss some phases of the economic side of dental practice as I see them.

One important phase is competition. This I would classify under three headings:—

1. Competition arising from without the profession.
2. Competition arising from within the profession.
3. Competition arising from within ourselves.

First, let me say that competition in itself is not a bad thing—whether it is good or bad depends upon how we endeavour to meet it.

Basically these problems of competition may be attacked by the profession in two ways—individually we may increase our professional skill and ability, which is all to the good, and of which I shall have

more to say later—but collectively we are an organized profession and these economic problems affect us as such, and as such we must meet them.

COMPETITION FROM WITHOUT THE PROFESSION

Our first and greatest competition arises from without the profession. Dentistry is attractive to the thinking man or woman, but alas! so few think until it is late, very late. And dentistry is in constant competition with attractive clothes, rapidly changing styles, radios, movies, entertainment, amusements, automobiles, magazines, cosmetics and luxuries of one kind and another. What have we to offer in this great competition? We have appearance, health, comfort, employability and thereby even financial return—all at moderate cost—but of this the general public knows only in the vaguest sort of way.

Less than three months ago a young man was referred to me by his older brother who holds a good position and who was genuinely concerned about the younger man. Briefly the younger brother's history was this—he was married, had had a fair education and had been trying unsuccessfully to make a liv-

* Presented before the Western Canada Dental Society at Edmonton, Alberta, June 2, 1941.

ing for himself and family on a fur ranch. He had lost all but three of his upper teeth. His lowers, while not perfect, were passable. After discussing the situation we decided to remove the three uppers and construct for him a full denture. The change in his general appearance was what you might expect. He could, and did, smile again. Before I had finally dismissed him as completed, he advised me that he had succeeded in getting a position in a Western hotel commencing May first. Two days later he came in and told me he had secured temporary employment which would help him until his new job started. If you doubt that dentistry has appearance, employability and financial return to offer to the patient just consider this case. The finest car, radio or new suit would not have procured that position for that young man.

In this competition, the psychology of the thing is rather against us. We know that the people need dental service but need is never enough. They must desire it—and desire it more than those things with which we have to compete. The individual carrying infected teeth needs dental attention, but that does not mean that anything will be done about it. It is first necessary to create a desire on his part to have it attended to. In many cases this desire can be created only by competent education.

As individuals we cannot go into the highways and byways and tell the public what we have to offer but organized dentistry can, and here is one place in which organized dentistry must help if we are to win in the economic struggle.

Why not take a leaf from the book of our successful competitors as to how this can be met. Let us strengthen the Canadian Dental Association to a point where we have a well-paid, full-time secretary with full time assistants to undertake these and other duties in a proper manner.

The Canadian Medical Association has such a set up.

In the December, 1937, issue of the Journal of the Canadian Dental Association appeared an A.D.A. release copied from Northwest Dentistry. This gives a list of the annual dues of many groups. As Northwest Dentistry is published in Minnesota, the information no doubt was obtained in that state. Some of these dues are quoted as follows:

Osteopaths	\$27.00
Opticians	18.00
Printers	2% of salary
Garage attendants.....	15.00
Oil Station attendants.....	30.00
Twin City Rapid Transit.....	18.00
Boiler Makers.....	24.00
Plasterers	24.00
Electricians	54.00
Painters	24.00

On enquiry in Winnipeg recently I was informed that Locomotive Engineers in Canada pay approximately \$40.00 per year, plasterers, \$15.00. Some other union men pay from \$9.60 to \$12.00 per year to their organizations.—At present we pay only one dollar a year to our Canadian Association. I tell you that in our own interest we must give this serious thought.

A fee of \$10.00 per year from each registered dentist in Canada would give the Canadian Association approximately \$40,000.00 and in no province in Canada would this make the total annual fee over \$20.00—in many cases much less. It could do so much for us in so many ways and I venture to say that when we have seen how this would work out, there is not a man who would not be glad to make it \$25.00 and more. I have said it could help us in other ways. Every member of our profession needs the protection which such a well-organized body could give. Consider the case of a dentist of Manitoba who undertook to provide dentistry for the members of an in-

KENNETH M. JOHNSON



stitution, run by a Dominion Department, on a basis of so much per day. On rendering his account at the rate agreed it was definitely cut on the authority of some one, not a dentist, who calmly said the amount of dentistry done, did not justify the account. Of course this is being fought as best we can with the organization we now have, but not in the way it could be fought by the type of organization we should have.

With such an organization our profession would be better enabled to meet general economic changes as they appear—because come they will, in one form or another, and undoubtedly if we are prepared to speak with one voice, properly informed, and backed by the whole profession, both we and the public whom we serve, will fare much better. Dentistry in Canada can organize to meet competition from without the profession.

The initial cost would be small, much less than we can afford even in these times and the ultimate returns will be beyond our power of reckoning.

COMPETITION WITHIN THE PROFESSION

The second competition I mentioned is that arising within the profession. This of itself is a good thing—good for you and good for me and for our competitors. I do not refer to “unfair” competition of which I sometimes hear and which should not appear in any honourable profession. It does at times raise “its ugly head” but sooner or later reaps its own reward often, however, not before it has done untold injury to those who are trying to do the right. Let us leave that to be corrected by those moral forces which have a way of catching up with such offenders.

In the better sense professional com-

petition should be more of a "co-operation". It resolves itself largely into individual effort and engages itself in the direct operation of the practice.

It has been said that the Standard of a dentist's living depends upon the following:—the order of relative importance does not matter,—

1. Professional training.
2. Professional and business ability.
3. Energy and health.
4. Personality.
5. Common sense.
6. Location.
7. Affiliations.
8. Increased recognition by the public of better dental care.

Each of these has a definite place in meeting the second class of competition of which I have spoken. First of all we must meet it by a definite effort to improve our skill and ability—by study, thought, care, and personal effort. Every man here is meeting this competition by attending this convention, learning what he can and discussing his individual problems with the other members. Study the journals; read the literature; watch for the new books; use the library services of the universities. Co-operate with the Dental Dealers. They have gone a long way toward helping the profession of this country; and because of their unique position of coming in contact with every member and of being in touch with the latest offerings of the manufacturers are able to make available for us quickly the newer supplies as well as the established lines. They have long recognized that what helps us helps them and I, for one, feel that they have a definite place in our set up and congratulate them on their efforts and thank them for their help.

Develop your personality and watch your personal appearance. Speaking of personality, Irving Bacheller once said: "I heard an old Yankee farmer express his sense of the thing we call *Personality*

in this manner. 'He's a little cuss but there's fellow inside of him whose brow touches the sky. When I met him I was looking down and when I left him I was looking up'."

Have the nicest office—the best equipment and the most pleasant surroundings within your power. Your office is where you spend most of your time and you owe this to yourself as well as to your patient. See that your office is spotlessly clean, and your waiting room comfortable and restful. In addition to our collective struggle against outside competition we must work individually. As an example, the literature in your waiting room should be of recent date and in good condition—but of far more importance is the material itself—it should offend no one and preferably should tell the story of dentistry rather than consist of attractive advertisements for beautiful dresses or smart cars. In our own waiting room we have a copy of a book entitled "Teeth, Health and Appearance" issued by the American Dental Society and telling the story of Dentistry. It is surprising the interest patients show in this work.

Speak in a language the patient will understand. It is of no use to discuss mesio-occlusal inlays with a patient—this is a gold inlay properly restoring the side and biting surface of this tooth. Where possible show the patient a model, or if not available, a picture—even a poorly drawn pencil sketch is superior to a lengthy word description.

Probably no one consideration in the patient's mind transcends that of our old enemy, pain. The dentist who learns to avoid pain or to reduce it to a minimum has an ally that is second to none. Every one of us should make use of everything in our power to assist our patients in what most of them regard as a difficult ordeal. We should have consideration and sympathy. We should use premedica-

tion, local anaesthesia and when necessary, general anaesthesia. Then as a further evidence of our interest we should telephone and enquire how they have gotten along after extractions and difficult operations. Patients do appreciate this so much.

Every dentist should have the best-trained dental nurse he can get at the earliest possible moment. A busy operator can use two such to advantage. Train her, co-operate with her and encourage her. She will be one of your greatest assets. Study patient psychology. Be interested in each and every one of your patients. This applies to you and to your assistant. The sympathy of an interested operator and nurse has meant more to a nervous patient than you can ever know.

Every phase of thorough Practice Building enables one to meet this competition. Proper records, collections, recall systems all have their place. Each one can well be made the subject of a paper in itself. Perhaps the greatest diagnostic aid that has come to dentistry in recent years is the x-ray. Get a machine as soon as possible. Some time ago we had the opportunity of examining a considerable group of patients without the use of the x-ray and then, immediately following, we were allowed to examine them with complete x-rays—bitewings and all—and the results were astounding. The additional amount of dental service required and the benefit accruing to these patients was beyond belief.

One further thought, if you would be happy in your practice—always give estimates—and keep within them. This, of course demands thorough examination and diagnosis. If something absolutely unavoidable arises necessitating an increase—make a thorough explanation before proceeding. The better you know a patient and therefore would like to think that this is unnecessary and perhaps

embarrassing, the surer you can be that it is essential. So much for competition arising within the profession.

COMPETITION WITHIN OURSELVES

The third and last great competition in dentistry is with *ourselves*. Always our other self is trying to persuade us that we need not bother to do the things we should do and this constant insidious competition has exacted a toll from us that we hesitate to admit.

Earlier I spoke of energy and health. There are some, endowed with excessive vitality who seem able to neglect these considerations, but they are few and far between, especially as we grow older. The average man must establish a balance in these matters and where undue strain has been required, compensation must be provided.

Reasonable recreation is essential, preferably something which takes you away from the field of dentistry but which helps establish suitable contacts with prospective patients and which at least is of an uplifting nature but which does not drain too heavily on an already overloaded energy.

Force yourself to take moderate exercise but control excessive expenditure of vitality, for example — the average man cannot hope to work hard for six days at anything so exacting as dentistry, and then step out on the seventh day and play 36 holes of strenuous golf—only to return and repeat the same thing week after week. Something has to give and it will probably be dentistry. Please do not misunderstand me. I enjoy the game of golf, I think, as much as anyone here, and I consider it the exercise of choice for the average dentist, but, like so many other good things, it should be played in moderation and within reasonable limitations which each must decide for himself. Once I heard a man say that a dentist's professional ability was

in direct ratio to his golf score. That, too, I would ask you to accept with proper reservations.

As a citizen the dentist should do his share in service to the community. It is an excellent idea to be interested in at least one public effort. Because of his talents and superior training, the dentist is well suited to hold a position on the school board, in his church or lodge or Sunday School. Unfortunately if one is competent in any of these he is usually besieged with requests to take on other public duties. A good rule to follow is that anyone of these is sufficient. Of late we hear of many cases where well-meaning publicly-minded groups will get together and raise a few dollars to buy a cheap equipment and establish a charitable dental clinic—the group puts up a few dollars and you are expected to contribute your time for several hours a week gratis in this “public-spirited” enterprise. They give a few dollars and you are expected to contribute your time indefinitely—say three hours a week—forty weeks a year, figure the cost for yourself—and it is difficult to refuse in a community where you are well and favourably known. This is just another matter which we should be able to turn over to organized dentistry. Let the Association explain the situation in its true light and no doubt the “arrangers” would understand without embarrassment to the local dentist.

In the continuous struggle you should force yourself to do the things that help the practice without undue regard to personal likes or dislikes. This applies outside the office as well as in. If you can see that the party is shaping up for a “late night” and you know that you have a busy and difficult day arranged for the morrow it is an excellent idea to excuse yourself at a reasonable hour—your friends will respect and appreciate your regard for your practice even though, at the time, they object to your leaving.

As we get older most of us develop a tendency to avoid the new techniques. This is a great mistake for mastering any new technique, in fact instituting any change successfully, gives a stimulus to the individual which repays one for all the effort expended; and the older man who by constant effort keeps up to date has the advantage of experience along with the new idea.

To sum up we would do well to oppose the competitions which we have to meet by a well-organized National Association, a well-organized individual practice and a well-ordered life.

You are a member of an honourable profession. You are responsible for the welfare of that profession. You are responsible for the welfare of yourself and your dependents. You are entitled to a just reward. Do all that you ethically can to get it.

When I am told that it takes a \$50,000 man to serve a client, or develop a coal mine, or put a corporation on its feet, I ask myself what is a man worth who takes a boy and through zealous care guides him to dental health, builds his body and bolsters his spirit to better face a world of reality? When I, as a dentist, live up to that challenge as I do in serving the community's boys and girls, I am making a contribution far greater than the banker's accumulation of dollars, the lawyer's drawing of briefs or the merchant's trafficking in goods. I am handling human souls, preserving, protecting and encouraging boys and girls, the finest things on earth. No banker, no lawyer, no merchant holds his head higher than I. When I serve children, I should justly be proud.—Walter T. McFall, in J.A.D.A.

Personnel and Personality in the Dental Office*

by JOHN A. BOTHWELL, D.D.S., Toronto, Ontario

AS THE subject of this paper was not of my own choosing its interpretation by the writer must be more or less conjecture. I presume, however, that I am to write about the personalities of the personnel, the personnel being all the persons making up the staff of a dental office. In the treatment of the subject along these lines, then, I want the word "personality" to have a much deeper meaning than it has generally. To most persons "personality" means "manner," and it ends with that. But relative to this subject, I want our concept of the word to reach the proportions of what might be designated "character in action". A person may have a very attractive and even charming manner, and yet be lacking in the qualities which, to me, are essential in those I would choose to work with me. A dentist, his associates, and his employees should express nothing of superficiality, but they should be exceedingly conscientious, kindly, and considerate, and all their activities should be governed by integrity and a deep sincerity of purpose. They should be good "fitters-in," so to speak, and should be capable of handling any situation which might arise in the office; tact and diplomacy should be their constant companions. The staff of a dental office should be made up of men and women of vision, of those whose time out of the office is not frittered away so that the larger life passes them by. Spiritual values should have an exalted place in their thinking.

The truth of the matter is that the personnel of any office constitutes a perfect reflection of the standards of that office. We must all admit that the environment in any place is much more mental than physical. With but rare exceptions, there is not one member of the staff who will not come in contact with the patients. All, then, should express in reasonable degree, the following attributes: a good appearance both in and out of the office, with neatness emphasized; a likeable manner, one which is responsive and which expresses interest in all who enter the office; a good voice; good English.

APPEARANCE

As to appearance, I am reluctant to say that all too many dentists are not sufficiently particular. The general trend is that this does not matter. Any kind of shirt, collar, or tie will do; and a suit, pressed or unpressed, will get us by. I cannot agree with this. A dentist cannot be too well groomed either inside or out of his office. Many times I have heard the appearance of professional men criticised by the public. The vogue may be for coloured shirts and collars and these may be all right on the street; but if worn on the street, they inevitably get into the office, and then! Well, they are not part of an operating uniform. If a white shirt is soiled anyone would know it, but who knows whether the coloured one is soiled or clean? Patients think of this and wonder. So, the only safe pro-

* Presented as part of a course to several groups of dentists in Toronto and sponsored jointly by the Royal College of Dental Surgeons of Ontario and the Academy of Dentistry, Toronto.

cedure is white, all white, from collar to shoes.

Closely linked to appearance, and strange but true, is conduct in one's social life. This is because the latter is usually, in a measure, responsible for the former. One should be discreet in one's social life and not deal in excesses that will reflect upon one's professional life. Many skilled men lose valuable patients because of personal carelessness. Some dentists, as well as the members of their staffs, are guilty of odours; some, perspiration; others, unpleasant breath, the latter too often caused by smoking or stale pipes; all too often there is an aroma suggestive of "the morning after the night before". Such odours are repulsive to patients, more repulsive than those who are guilty realize. Dentists who are victims of selfish habits count not the cost of their practices. Analyse for yourselves, balance your accounts, and give your patients greater consideration.

PROFESSIONAL PROGRESS

Are you satisfied with your progress professionally? What have you accomplished since you entered the profession as a student and later as a graduate? Has your ability as a dentist improved as time has gone on apace? Are you keen and enthusiastic about that which you have chosen as your life-work? Or is there a tinge of disappointment that you have not been more successful? Does the devil "discouragement" try to get you down by whispering to you that most poisonous of all suggestions, "O, what's the use, anyway?" If so, your only answer should be, "Get thee behind me, Satan". Have you really an honest desire to go forward? If you have, nothing in the world can hinder you. Take stock of yourselves. If you are young, you have yet a grand opportunity. If for you, "life begins at forty", you still have a chance; yes, and even at fifty. Never

believe that you cannot yet be successful. It is necessary to realize, however, that success is not born of that which "dreams are made of". A little dreaming, perhaps, is all right, but dreaming alone does not make for success. Success is the outgrowth of sincerity of purpose, devotion of thought, and assiduous, consecrated effort.

In the practice of dentistry our education is far from complete when we leave the halls of our Alma Mater. We start then to earnestly put into practice what we have learned during those few years at college, and we keep on improving. We must never become complacent or self-satisfied. We must never allow our desire for learning to wane. We should avail ourselves of every opportunity for advancement. We should take post-graduate courses in every branch of our professional activity. We should overlook no opportunity that will aid us in developing our technical skill and judgment. Our results will be in direct ratio to our successful application of proven methods. We should do some research along a line which particularly interests us. We should attend as many dental conventions as possible where up-to-the-minute ideas are expounded by those who have proved them of merit. We should be members of our local, provincial, and Canadian dental organizations, and lend them our whole-hearted support. We should read, and occasionally contribute to our dental journals. In a nutshell, we should keep abreast of the times and keep posted on the latest ideas in the various branches of our work. Never become stale. Stagnation is one of the greatest enemies to success.

MANNER

Now to continue with these attributes which are assets in the dental office's personnel! "Manner" was the next one. Manner goes a long way in either attracting or repelling patients. How many

patients want to go a second time to a dentist whose manner is not pleasant, and this regardless of his skill? Kind but dignified consideration always makes a favourable impression. An attribute which is invaluable is the ability to put people at their ease. In the dentist himself this faculty is one of his greatest assets. Another is to be a good listener. When patients have something to say they do not take kindly to attitudes of indifference and apathy. Sincerity always meets with a warm response. In his office a dentist needs all the qualifications he requires in the social world, and more. Poise is well worth developing. We should never allow circumstances to disturb us. Many patients are trying, but this should never make us impatient or abrupt. Even when all about us seems mad confusion, we should stand in the safety zone of a poised consciousness. We should keep our feet on the ground regardless of how the storm beats about us. This will beget us respect. Arguments with patients should be avoided, and the subjects of religion, politics, and personal affairs should be eliminated completely. And speaking of respect, a dentist owes it to himself as well as to his profession to deserve and then to command respect. I am thinking particularly now in terms of the way he allows himself to be addressed. I think by precept wherever it is possible—with his staff, for instance—and by example in addressing other doctors, he should encourage being called "Dr. Brown", "Dr. Smith". And of course the contraction "Doc" is absolutely "taboo". A dentist should not hesitate in the least to reproach a person who uses it; it is not only undignified but it is a reflection on our profession. A nurse's surname, incidentally, should also be used, preceded by "Miss". The word "Nurse" is too mechanical and tends to rob a girl of her individuality.

REFINEMENT

A good voice is important. Most people are impressionable to the quality of voices. Our patients will not be exceptions. Some voices are harsh, high-pitched, and some even rasping. Such voices are irritating to those who hear them. With most of us a little voice culture would not be amiss. A pleasing speaking voice expresses refinement and creates a good impression. We should think of this when engaging associates and nurses.

Good English too should be spoken at all times. It is very important. Discriminating patients appreciate every possible evidence of refinement. A good background contributes largely to fluency of speech, but even where this has been lacking the right desire linked with power of observation and perseverance will do much to achieve good results in conversational English.

POSTURE

Although it could scarcely be designated an attribute I want to refer to "posture". This, in my opinion, will not be amiss. Many dentists are stooped. Our work at the chair will make us so if we are not on guard. I was stooped at one time. Early in my practice a most unpleasant throat condition developed. The act of speaking irritated my throat. I consulted many doctors without success. No one could find the cause. Finally, one doctor felt that my voice might be improperly placed and suggested consulting a voice teacher. I did, and the voice teacher told me I could never be helped unless I changed my posture. He pointed out that not only was I stooped, but that I sat on my back. He said "You must both sit and stand erect at all times". Striving to obey, the condition gradually improved until it finally disappeared. This, I feel, has been largely responsible for the good health I have since enjoyed. Men, watch your posture. Stand erect;

sit erect. No man can do his best without a strong, healthy body.

RECENT GRADUATES

To those who are fairly recent graduates I would like to make a few suggestions which come from the depths of my heart, even after thirty-five years in practice. To me they are extremely important. Firstly—When a man is young and just building a practice, he ought to do all his own technical work. This he should continue until in a twelve-hour day he can find no place for it. This work will so improve his skill that he will be able to talk intelligently and with authority to anyone later employed to take care of this department for him. Secondly—I think every dentist should lean to one particular phase of the technical aspect of his work. He should focus his thought and develop his ability in that direction, not at the expense of his other work of course, but with a leaning toward specializing. His post-graduate work should always include this particular subject. Thirdly—I do not believe a dentist should specialize before he has been in practice for five years at least. While leaning toward a specialty, however, a general practice will allow for the filling of many vacancies in the appointment-book, until such time as the specialty consumes all one's working hours. During this building period, if the opportunity arises, a man might do hospital or clinic service, or best of all, teach. Never refuse a teaching opportunity. I owe a great deal to having taught every subject relative to the practice of dentistry while serving as a teacher at the Royal College of Dental Surgeons. Teaching most assuredly develops one's ability. One cannot teach unless one possesses, not only theoretical, but practical, knowledge himself, and this necessity stimulates constant study and research.

The successful dentist cannot work alone. His thoughts cannot be in the

first person singular. He must share with others the fruits of his own experience. He should make a substantial contribution to all the dental societies. He will lose nothing by this and will gain a great deal. And in his practice he can do so much to educate the public to the value of dentistry.

And now a word about community life! It is the opinion of many men that memberships in lodges, churches, clubs etc. are potential practice-builders. I have always doubted this. I do, however, feel that from the standpoint of our citizenship in a community we should be keenly interested in that community's activities. There, of course, we will certainly make many contacts through which some patients may come to us. In my practice, however, patients from such sources have been in the minority. The best practice-builder of all is to "deliver the goods" within our own offices.

OFFICE INTERIOR

In a previous paragraph I mentioned that most patients appreciate an atmosphere of refinement. They appreciate, as I said, a dentist who has interests outside of dentistry. And if these interests are refined in character, becoming to a professional gentleman, the dental office has then a greater appeal to a discriminating taste. I do not think the technical and mechanical should ever submerge the expression of our creative and artistic instincts. So, let our office interiors reflect something of our souls. There is a joy and satisfaction born of beauty which nothing else can give. Everyone loves beauty; there are no exceptions among dentists, patients or nurses. Sad to say, however, the expression of beauty in our offices is too often considered a luxury. To the writer it is a necessity. Some persons are under the erroneous impression that an interior must be elaborate in order to be beautiful. Such is not the case. Simplicity should be the keynote in every

phase of decoration. But let it express harmony; then it will be beautiful. The love of the beautiful is really innate in everyone. It may require a little thoughtful searching to awaken us to this fact, but once we have beauty around us we find ourselves responding to it very quickly. Soon we realize we would never again want to be without it. We could easily be like the poet who wrote;

"If thou hast money for two loaves of bread,
Buy only one and purchase daffodils;

The broken bread lies in the earthen bowl
While golden daffodils delight the soul."

Flowers should always be in evidence in the office, fresh ones rather than artificial. The cost is not great. A standing order at a florist's for a supply every Monday morning costs very little and is infinitesimal compared with the pleasure it gives to many. It should not be necessary, of course, to say that cut flowers should be fresh. A fresh plant might serve as a substitute for cut flowers when the latter are not available. And now a word about pictures! How important they are! Nothing, in my opinion, expresses in greater degree the taste and something of the character of the dentist, than pictures. There is little left to learn of a man after one has seen the pictures in his office.

SERVICE

It is my hope that you will have gained the impression that my ideas in connection with a dental office's personnel evolve around the word "SERVICE". Service must be the keynote of a successful dental practice. Selfish motives should have no place there. A dentist's standards and policies should be governed by the Golden Rule. Do we always do for our patients the quality of dentistry we would want in our own mouths? Does the thought suggest itself that the patients would not appreciate it and would not be willing to pay for it? This is not true. In my experience it has not been nearly so difficult to gain the appreciation of a

patient to a fine dental service as it has been for some dentists. When a little time is taken to give a patient an intelligent and comprehensive conception of what in our judgment is best to do, the appreciation of and the subscribing to the service is generally forthcoming. Once desire is created, resistance fades into oblivion. And when we know in our hearts that it is right for a certain service to be rendered we fail when we do not take the time to educate our patient to the point of desire. I think we are then "short-weighting".

This word "short-weighting" has very apt usage in this connection. Short-weighting is a word that has remained in my mind for many years. So used, I read it in an editorial in "The Globe and Mail" in November 1936. It contains such a moral that I am going to quote excerpts from it:

"In virtually every walk of modern life a deliberate policy of shortweighting has developed, and in most cases there is no machinery (no scales) for bringing retribution to the offenders . . . Politics, business, the professions, manufacture and all the many branches of our civilization are hampered by the short-weighters. It depends on the public whether eventually, means will be found to convince all guilty of such dishonesty that "shortweighting" is a species of fraud that is certain to be detected ultimately, and certain to react against the man who is short-sighted enough to resort to it."

This short-weighting, I am sorry to say, has not escaped the dental profession. Our service to our patients should include no guesswork. Yet if we assure a patient that his mouth is in a healthy condition when it has not been thoroughly and completely examined, we have resorted to guesswork. Today there is no excuse for this. We have every means necessary for a complete oral examination and diagnosis; why should we not use all of these facilities? If we do not we are taking a long guess and assuming a responsibility we should refrain from taking.

There is another form of short-weighting that is all too prevalent among the dental profession. It is that "big, bad wolf" called debt. It should have no place among members of our profession. And yet one hears all too frequently that some dentists are on the C.O.D. lists of supply houses and dental laboratories, all because they have proved themselves undeserving of credit. Why should this be? There may be several causes, but there is not one that is beyond remedying.

Are we endeavouring to maintain an overhead out of keeping with the revenue from our practice? Are we trying to "keep up with the Joneses" in our social life? Are we joining expensive clubs before our income warrants it? In other words, are we catering to selfish motives and gratifying selfish desires with money which really belongs to someone else? If we are, we are "short-weighting" in a big way.

But now that we are awake to our transgression there is only one thing for us to do. STOP IT! Let us analyse our whole business and personal policy and we'll find the cause. There will be no doubt about that. Then, having found it, let us keep busy at eradicating it, until the job is completed.

A dentist should establish his credit as early as possible in his career. We cannot afford to be in debt. Our profession deserves the world's respect and we owe it our contribution of good reputations.

One wise provision by a professional man is the building of a cash reserve—and this in a medium that is not too accessible. If such a provision is considered astute by banks and industrial concerns it must also be wise for the professions. They do not escape the effects of economic crises. So why not prepare for them? It is better to have a growing reserve and not need it than to need capital and not have it. In any case, let us avoid debt as if it were the plague.

TAKE THE FIRST STEP

After this digression, let us return to our general topic. Have your professional achievements to date not satisfied you? All right! That's no cause for discouragement. Be grateful that you have awakened to a condition that needs improving. Begin right away to correct it. Begin—ah, that's the secret! It is really sad how many persons never begin. And taking the first step is the important one—at least it is the first important one. Doing well what is ours to do at the moment is the great lesson that needs to be learned. Procrastination is the "worm at the core". Doing what is ours to do and doing it well prepares us to take up bigger things. How do we expect added opportunities before we avail ourselves of those at hand? Unused talents wither and are soon lost from sight. Even good seed requires nourishment. And we must use every moment for this mental gardening. Even if we seem to have only one talent, it must be improved before we are ready for progress. We cannot do any jumping nor assume positions not attained through our own efforts. We must do our own work and do each step well. My advice to each and every one of you is to take the first step and see what happens.

Making this statement, "Take the first step and see what happens", reminds me of an allegory I read in a Commencement Address delivered at Principia College in Missouri a few years ago. It is "à propos" right here so I shall pass it on to you.

"One foggy night in London, I started out about ten o'clock to bicycle home up a familiar hill. Usually one could see a double line of street lamps for quite a distance. I looked, and all seemed dark and dense. The fog rolled up, obliterating everything. I questioned whether it would be wiser to return to my friend's home, as the road behind me was clear of fog. But I looked again, more carefully, at the road ahead. At a distance of thirty yards I noticed the light of one street lamp shining faintly. So I mounted my bicycle

and rolled cautiously toward it. When I reached that light I saw in a direct line ahead of me, one more street lamp. By keeping moving with only one light at a time, I presently gained the top of the hill. There I found a clear atmosphere and my road home well lighted. You notice that it was not until I had caught up with one light that another appeared. If I had bargained to see two lights at the same time before moving on I should have been at a standstill at the bottom of the hill for some time."

Need I say anything further? What a parallel to our own experiences is this bicycle ride in a London fog! Most of us want the goal before we have proven our worthiness of it. And do we not want to see several lights at one time? O yes—and all we ever need is one. Our beloved Sovereign King George VI told us this, in the most inspiring of all his messages. Here it is: "Go out into the darkness and put your hand into the hand of God. That will be to you better than light, and safer than the known way".

SUMMARY

In summing up, I firmly believe we cannot do other than realize that the success we achieve professionally is in direct ratio to the quality of the service we render to others. And who is responsible for rendering this service? The office's whole personnel. The dentist cannot do it alone. This being true reveals the necessity for a personnel of high calibered persons. Mediocrity will not do. And regardless of the capacity in which they serve, they should co-operate in their every endeavour to fulfil the aims of the dentist which, incidentally, should always take a three-fold form. A dentist's dream for success should embody service to his patients, progress for himself, and

the elevation of his profession. As for the last mentioned aim! Are we honestly striving to make Dentistry's place in the professions better because of our efforts? Are we striving to build up our own practices so that Dentistry as a profession will be on a higher plane because of our contribution? And what about our fellow-practitioners? Can we honestly say we rejoice over their achievements and success? Or, when we see evidence of their progress do we send forth malicious whisperings and try to cause them growing-pains? Do we begrudge them a larger and more successful practice than ours? What a wrong state of thinking this indicates! Success is for all of us. Success is not due to luck. Success is the product of constructive and unselfish ideas employed and practised successfully in our business and professional policies. Under such conditions success is inevitable. Our daily experience is not the result of world-conditions nor of what is popularly known as "the times". Our daily experience is the subjective state of our own ethical standards. Our mental homes are the only homes in which we really live. Our environments are those of our own making. Our harvests are the fruitage from the seeds of our own thoughts. "Like produces like". We cannot grow "grapes from thorns". If we express in everything we do, love for the whole human family and leave SELF in the background we need have not the slightest fear of bringing into our experiences the success which was our dream before we launched our bark on the uncharted sea of our lifework.

Conventions

GREATER NEW YORK DENTAL MEETING, DECEMBER 1-5, HOTEL PENNSYLVANIA, NEW YORK.

A program will be sent to any Canadian dentist upon request.

Percy T. Phillips, Chairman, Room 106A, Hotel Pennsylvania, New York.

MIDWINTER MEETING OF THE CHICAGO DENTAL SOCIETY, PALMER HOUSE, CHICAGO, FEBRUARY 23-26, 1942.

Unusual Case of Dental Interest

by GEORGE A. MORGAN, D.D.S., Toronto, Ontario

DERMOID CYSTS

DERMOID cysts have been defined as those containing tissues or appendages derived from the epiblast, the most commonly found are hair, skin, teeth and occasionally teratoid remains. These are congenital in origin and chiefly ovarian in location.

This case as presented is that of a female, white, aged 30, pregnant, full term; who presented herself at the Toronto General Hospital because of abdominal pain.

X-ray examination revealed a normal size foetus, the delivery of which was obstructed by a large dermoid cyst containing masses of tooth structure and investing bone as illustrated in Fig. I.

Figure I.

X-ray of pelvic cavity illustrating full term foetus obstructed by large dermoid cyst containing tooth structure.



Caesarean section was successfully accomplished and the dermoid cyst and foetus removed.

Of dental interest was the number and amount of tooth structure present as illustrated in Fig. II.

Of particular dental interest is the fact that one of these masses of tooth structure simulated in appearance, a cuspid tooth, complete with investing bone structure as illustrated in Fig. III.

X-ray examination of this particular mass of tooth tissue revealed the fact

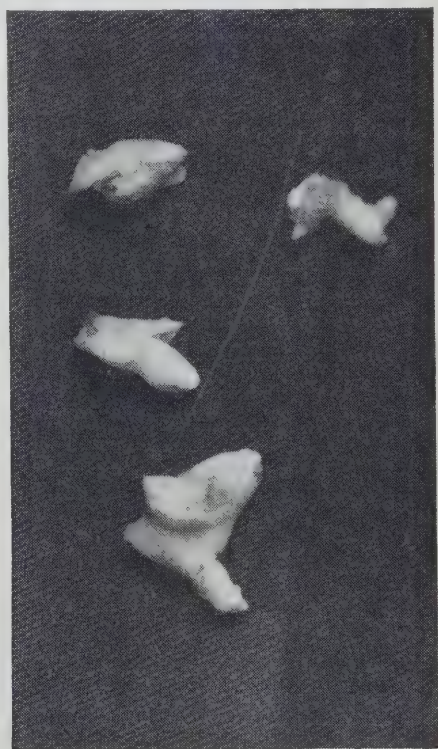


Figure II.

Photograph of tooth structure removed from dermoid cyst.



Figure III.

Photograph of cuspid-shaped tooth removed from dermoid cyst.



Figure IV.

Photograph of x-ray of tooth as illustrated in Figure III.

that this cuspid-shaped tooth contains approximately the normal proportions of tooth structure together with investing bone as illustrated in Fig. IV.

COMMENT

In a recent review of dental literature

we were unable to find any instances in which fully formed teeth were observed in a Dermoid cyst and to the author's knowledge, this is the first time that such a structure has been x-rayed determining the proportions of enamel, cementum and root canal structure.

In all the movements of the surgeon there should be neither haste nor waste. It matters less how quickly an operation is done than how accurately it is done. Speed should result from the method and the practised facility of the operator, and should not be his first and formal intention. It should be an accomplishment, not an aim. And every movement should tell, every action should achieve something. A manipulation if it requires to be carried out, should not be half done and hesitatingly done. It should be deliberate, firm, intentional and final. Infinite gentleness, scrupulous care, light handling, and purposeful, effective, quiet movements, which are no more than a caress, are all necessary if an operation is to be the work of an artist, and not merely of a bawler of flesh. For every operation, even those procedures which are now quite commonplace, should be executed not in the spirit of an artisan who has a job to get through, but in the spirit of an artist who has something to interpret or create. An operation should not only bring relief or health to the patient, but should give a glow of keen delight to the artist himself. A thrill of joy and a sense of complete satisfaction to a critical spectator.—The late Lord Moynihan, in Dental Record.

Relative Masticating Efficiency of Posterior Tooth Forms

by FELIX A. FRENCH, D.D.S., F.A.C.D., Ottawa, Ontario

THE question often arises "Are non anatomic teeth as efficient in mastication as the anatomic forms?"

Tests have been and are being made on individual patients to determine the relative masticating efficiency of the various posterior tooth forms now in use.

If masticating efficiency was the only factor we had to consider in constructing artificial dentures I feel that teeth with 35 to 40 degree cusps arranged to functional balance at the correct vertical opening should be about the most efficient masticatory machine we could build. But, when we take into consideration a lot of other factors, I am not willing to concede that cusps of this nature are best for artificial dentures; on the contrary, I feel it would be more correct to say "the steeper the cusps the less satisfactory the dentures will be" for the very simple reason that a precision intercuspal relation of the teeth cannot be maintained in the mouth for any length of time.

Years ago 45 degree cusps were advocated. They made a very efficient masticatory machine for a time but wrecked practically every mouth in which they were used.

In trying to imitate the natural by using intercusping teeth on artificial dentures we overlook one very important fact viz, the closing movement of the mandible is a component movement (upward and forward). As natural teeth wear down and the jaws come closer together the wear on the occlusal surfaces is in harmony with and accommodates the closure. If for any reason some of the teeth do not wear in harmony

with the others they may become traumatized and we have to do with a stone what should have been done by natural wear. The wear of natural teeth is a very slow gradual process and as a rule not extensive; a vertical closure of one and a half or two millimeters would be considered extensive.

In the case of artificial dentures the situation is entirely different. The occlusal surfaces of the teeth do not wear down; any vertical shortening is the result of changes in the supporting tissues. These changes are much more rapid and more extensive than the occlusal wear of natural teeth. A vertical shortening of 4, 5 or 6 millimeters is not uncommon and since there is no compensating wear of the occlusal surfaces the occlusal relations are thrown completely out of harmony with the jaw relations. This results in instability of the dentures and soreness of the supporting tissues, two conditions largely eliminated by the use of non intercusping teeth.

To keep precision intercusping occlusions in harmony with changing jaw relations by means of base adaptation would require a continuous everlasting series of rebasings which would be most troublesome to the operator and most inconvenient and expensive to the patient.

In making compensations on the occlusal surfaces by doing away with interlocking cusps the changing jaw relations are accommodated and rebasing only becomes necessary when the amount of tissue change and degree of closure warrants it.

Relative Masticating Efficiency of Posterior Tooth Forms

It is obvious that natural teeth and artificial dentures present quite different problems and that there are many differences for which compensations must be made.

We all agree that Nature harmonizes and co-ordinates the various factors that enter into function. In the case of masticatory function the main factors are:

1. The opposed occlusal surfaces.
2. Their retention and support.
3. The biting force which puts them into action.

If we duplicate the natural occlusal surfaces on our artificial dentures we should also duplicate the retention, support and biting force to be in harmony with Nature's plan. This we cannot do. The best fitting full denture can be easily removed by the thumb and finger. When we try to visualize the force required to remove a set of natural teeth in the same manner we get some idea of the vast difference in retention. The average biting force of a set of natural teeth has been estimated to be about 150 lbs., while that of artificial dentures is placed at only 25 lbs.

When we consider the many functional differences between natural teeth and artificial dentures it is quite clear that some compensations are very necessary. The only place these compensations can be easily and satisfactorily made is on the occlusal surfaces.

Non intercusping tooth forms have so many advantages over anatomic tooth forms both in the construction of dentures as well as in their functioning in the mouth that it is no longer a question of whether they are more or less efficient in mastication but of whether they are sufficiently efficient for all practical purposes.

The thousands of cases in actual use during the last ten years have definitely answered this question in the affirmative beyond any shadow of doubt.

Tests on individual patients of the relative masticating efficiency of anatomic and non anatomic tooth forms serve little purpose now other than that of satisfying our curiosity. The really important point is which of the non intercusping forms is the most efficient in this respect.
111 Metcalfe Street.

From the earliest times the number seven has always had a mystical significance . . . Altogether, there are over two hundred references to the number in the Bible.

Seven were the virtues—Faith, Hope, Charity, Prudence, Temperance, Chastity and Fortitude; seven the deadly sins—Pride, Covetousness, Lust, Envy, Gluttony, Anger and Sloth; seven the gifts of the Holy Ghost—Wisdom, Understanding, Counsel, Ghostly Strength and Fortitude, Knowledge, Godliness and Fear of the Lord.

There were seven wonders of the ancient world: The Pyramids of Egypt; the Mausoleum or tomb built for Mausolus, King of Caria, by Artemisia his Queen; the temple of Diana at Ephesus; the walls and hanging gardens of Babylon; the vast brazen image called the Colossus of Rhodes, which was so high and its legs so wide apart that a vessel in full sail could enter between the legs; the ivory and gold statue of Zeus by Pheidias, the greatest sculptor of Greece; and the Pharos or watch-tower at Alexandria, built by Ptolemy Philadelphus, King of Egypt.—Rudolph de Cordova in the "News Chronicle."

Every dentist (except myself) should have a sensitive tooth filled about once a month, and I believe he would be more careful and considerate of his patients during the intervening weeks. I speak "by the card."—Dentistry, a Digest of Practice, July, 1941.

Dentists from India

by MISS MONICA MUGAN

(This is a copy of the interview which Miss Mugan held with Miss Canteenwalla and Dr. Ginwalla. Miss Canteenwalla is a 5th year student at the University of Toronto and Dr. Ginwalla is a graduate of a dental college in Bombay, India, a post-graduate of McGill University, and has been training at the Faculty of Dentistry, Toronto, this past year.)

This interview was broadcast over the Trans-Canada network from CBL on May 29, 1941, by arrangement made by Dr. A. E. Higgins, Chairman of the Public Dental Health Committee of the Canadian Dental Association.)

MUGAN: I'm a bit confused by your names. . . Do I call you Dr. Walla or Dr. Ginwalla . . . and is your first name Canteen—or does that go with the Walla?

CANTEENWALLA: No, no, my first name is Tehmi—Canteenwalla is my last name, and Ginwalla is my cousin's last name. . .

MUGAN: Very similar—is that because you're cousins? Does the walla mean a relationship?

GINWALLA: 'Walla' really means 'owner of'—and long ago Tehmi's fathers must have owned a canteen—that's how their name developed. My ancestors, I expect, had a cotton ginning mill, and took their name from it . . . just as many English men are named Smith because their fathers were smiths . . . and tailors . . . and so on. . .

MUGAN: Is your father still in the cotton business—and has Tehmi's father a canteen?

GINWALLA: No, Tehmi's father is a textile manufacturer, and mine is interested in machinery. . .

MUGAN: You will be the first dentists in your families?

CANTEENWALLA: We will. . .

MUGAN: Couldn't you study dentistry in India—without coming all this long way to Canada for your degree?

GINWALLA: Oh, yes—I have my degree from the University of Bombay, and Tehmi studied there too for three years . . . but you know how far fields look green. . . Canadians, I believe, go to

England, to Cambridge and Oxford—and we from Bombay come to Canada. . .

MUGAN: Do you find much difference in the course here?

GINWALLA: I believe your theory and groundwork is much superior to ours . . . bridgework and crown work—are taught more thoroughly here. . .

CANTEENWALLA: But not extractions, Minno—in my class in Bombay I had far more practice and experience in extraction than one ever receives in a Canadian University, as far as I have discovered.

MUGAN: Miss Canteenwalla—aren't you an unusual person, taking dentistry . . . are there many women in India studying it?

CANTEENWALLA: No, there are women dentists, but none with a degree of Doctor of Dental Surgery. . . I will be the first woman who is so qualified.

MUGAN: So you can practice there without a degree, eh?

GINWALLA: Yes, unfortunately India is the open door to all the quacks in existence . . . our laws are not stringent as far as professions are concerned, and many people set up shop and hang out shingles as dentists—and carry on a real trade—without being qualified. . .

MUGAN: You have, of course, qualified men as well . . . you're not going to be the only man dentist to save Indians' teeth?

GINWALLA: Oh, no, we have very fine dentists too. . .

CANTEENWALLA: Just as well

equipped, and as efficient as any on the North American continent . . . but I think Ginwalla is referring to the Japanese who come in, and clean up big fortunes with dental shops. . .

MUGAN: The Japanese?

GINWALLA: Yes, and a great many Japanese too—also other nationalities as well—long ago dentistry in India was practised by barbers and goldsmiths. . .

MUGAN: The same as we had it . . . at least barbers were our physicians and dentists in the old days . . . but I don't believe goldsmiths pulled teeth. . .

GINWALLA: Well, gold fillings have been extremely popular in India for hundreds of years, and it was logical that the goldsmith should be the dentist—in the early days. . .

CANTEENWALLA: We might tell her of the way he treated pyorrhea. . .

MUGAN: How was that?

CANTEENWALLA: Well, teeth become loosened, you know, through the disease, pyorrhea—and in the early days the goldsmith tied them into a man's mouth with a gold thread . . . he had a very fine gold thread, and he would tie one loose tooth to the next loose tooth with a loop of thread, all the way around. . .

MUGAN: Splendid treatment. . .

GINWALLA: Some of the so-called dentists of Bombay still string teeth together. If you go into a dentist's shop in the cheaper section of the city, you'll often see strings of teeth hanging about, festooning the walls, like Christmas decorations. . .

MUGAN: You mean that when he pulls a tooth he hangs it up—the way the original North Americans used to hang up scalps?

GINWALLA: Yes.

MUGAN: What would a dentist's shop look like in India. . . I don't mean the office of a qualified man. . . I mean one of these fly-by-night places. . .

GINWALLA: Well, the tooth doctor

usually lives in his office . . . it will be one room with a bed in a corner, and a sink, and a chair . . . not a dentist's chair as you know it, but an ordinary kitchen chair . . . that's for the patient. . .

CANTEENWALLA: And don't forget, tell her about the cuspidor. . .

GINWALLA: Yes, the cuspidor is a very important part of the furniture . . . it's usually very big, and made of brass . . . and the so-called dentist sets it up high on a tripod . . . you know the women of India very often carry water on their heads in large brass vessels . . . water jugs. . .

MUGAN: Yes, we've seen them in pictures . . . that's what makes you so graceful, Miss Canteenwalla, carrying a jug, isn't it?

CANTEENWALLA: Oh no—I never carried one on my head . . . it's just when you don't have running water in your home. . .

GINWALLA: Well, these water jugs are put on three-legged stands—tripods . . . and the Japanese dentist uses these tripods to hold his spittoon. . .

MUGAN: What about running water and sanitation in his shop . . . any germs floating around it?

CANTEENWALLA: Oh, plenty of them . . . there is no sterilization. . .

MUGAN: I suppose a dentist of this sort charges low fees?

GINWALLA: Well, he'll give you a set of teeth for about \$3.00. . .

MUGAN: You mean a complete set of teeth for three dollars?

GINWALLA: Yes, upper and lower plate, complete. . .

MUGAN: Does he have sets in boxes, and try them on you, the way a salesman fits shoes?

GINWALLA: Oh, no, he makes plates to fit the customer. . .

CANTEENWALLA: And in spite of their primitive methods, some of the men turn out very good teeth . . . at just three

dollars a set . . . they're good dental mechanics, if they aren't good dentists. . .

GINWALLA: Yes—do you remember, Tehmi, the man with the six chairs in his shop? He had five or six chairs in his office, all lined up the way you see chairs lined up in a large barber shop . . . and half a dozen patients sitting on the chairs . . . and he'd go down the line from one to another, taking bites . . . impressions . . . and then walk out and make them very good dentures. . .

MUGAN: While they waited?

GINWALLA: Practically. . .

MUGAN: And you, Tehmi, what sort of work do you expect to do in India? Do you think the men will come to your office—trust a woman with their ulcers and cavities?

CANTEENWALLA: To tell the truth I'm not interested in getting the men as patients . . . there are a great many veiled women in India, you know, still—among the Moslems and the Hindus—and these women dislike very much going to a man dentist. . . I hope to work up quite a practice among the veiled women in my country. . .

MUGAN: That should be a good field! By the way, I know you're in our western clothing now—but do you ever wear native dress when you're at home?

CANTEENWALLA: Of course . . . always . . . at school, at the University, we wear western clothes because they're more convenient, but as soon as we get home we change into our own costume . . . I—personally—think our dress is becoming and graceful, and I like wearing it. . .

MUGAN: What sort of dress do you wear? Has it a veil?

CANTEENWALLA: No, our women do not wear veils. . .

MUGAN: Our women? What are you?

GINWALLA: We are Parsees . . . sometimes we find that you people in America think of Parsees as upper-caste Hindus, but that is quite wrong . . . we are really

Persians.

MUGAN: Persians! I thought I was interviewing two natives of Bombay. . .

CANTEENWALLA: We are from Bombay . . . and so were our fathers for 1300 years . . . thirteen hundred years ago some Persians migrated to India and we are their descendants. . .

MUGAN: Then you don't come under the caste system. . .

CANTEENWALLA: No, we're not Hindu at all . . . we have no castes in our religion. . . I believe we are quite progressive in our thinking. . .

MUGAN: Just what is the religion of the Parsees?

GINWALLA: We are worshippers of Zoroaster, the prophet who was born between 3000 and 5000 B.C.

MUGAN: Was that originally a Persian religion?

GINWALLA: It was . . . but after our fathers went to India the Moslems invaded Persia and the Mohammedan religion is the principal one there today . . . but we in India kept our Zoroastrian faith . . . and it is in the same pure state it was when we migrated to India centuries ago. . .

MUGAN: Are there many of you Parsees?

CANTEENWALLA: No, not very many . . . only 90,000, because we take no converts to our religion.

MUGAN: That's unusual. . .

CANTEENWALLA: Yes, it is—but we never take converts, and furthermore if a Parsee girl or boy marries outside his faith, he leaves it automatically . . . we marry as much as possible in our own group, and in consequence the worshippers of Zoroaster are few . . . but our race is one of the purest in the world . . . we've kept it that way for centuries. . .

MUGAN: Zoroastrians—now I know—we talk about you over here, I think, as sun-worshippers . . . am I right?

GINWALLA: That's right . . . we believe

that the elements . . . that fire, air, earth and water . . . are all attributes of God . . . we have special prayers, for instance, to say before a fire. . .

MUGAN: And another thing . . . you put your dead on the Towers of Silence? Why don't you bury your dead?

GINWALLA: That's right . . . the Hindus burn their dead . . . cremate them . . . you usually bury them . . . but to us, fire and earth are sacred . . . so we build tall towers of stone, and the bodies of the dead are left on top of them . . . left to the sun and air. . .

MUGAN: Are there other Zoroastrians in Canada . . . or do you find yourselves alone when you worship?

CANTEENWALLA: We continue our prayers here together—I don't know any other Parsees. . .

MUGAN: I suppose you sun-worshippers find our country of Canada very cold . . . you won't mind the heat of India. . .

GINWALLA: No, you are wrong. . . India is not the hot country Canadians think it is. . .

CANTEENWALLA: We have both been much warmer here in Toronto than we ever were in Bombay . . . sometimes I think Canadian ideas of India are a bit confused. Our climate is really very comfortable . . . it isn't as damp and hot in Bombay as it is in Toronto in mid-summer. . .

GINWALLA: Then of course our houses are built for ventilation. We have big

windows that open out—and create cross-drafts through the home. . .

CANTEENWALLA: And we have beautiful apartment blocks—more modern than any I have seen here—and beaches. . .

MUGAN: Public beaches?

GINWALLA: Oh yes—all beaches in Bombay are free—and they're beautiful.

MUGAN: Do you take a dip every morning before breakfast?

CANTEENWALLA: Well, not always . . . but we do have a cup of tea before breakfast. . .

MUGAN: In the English manner?

CANTEENWALLA: Yes, we have afternoon tea, too—and dinner at about nine in the evening—I suppose we've adopted the habit from the British in India. . .

MUGAN: Dinner at 9 p.m.; Do you get up early?

GINWALLA: Always—we're up at 5 or 6 in the morning—the sun is so bright that you never want to sleep later. . .

MUGAN: You must think us sleepy-heads then—not many Canadian townspeople see 5 a.m. . . What is your saddest impression of our country?

CANTEENWALLA: It's the food—isn't it, Minno?

GINWALLA: Yes, Tehmi, the food. . . I often long for a good curry. . .

CANTEENWALLA: We like your country very well, but if you would like a change from boiled potatoes and vegetables and roast beef—I'll recommend a good Indian curry. . .

MUGAN: Thank you—a good tip!

The paradox of Newton's scientific career is due to the fact, probably unique in the history of scientific men, that he was a genius of the first order at something he did not consider to be of the first importance.

Newton, when questioned, once said that if he differed from other men the difference perhaps lay in his capacity to pay attention to a problem. Like many other statements that have been attributed to Newton's modesty, this is merely an exact statement of the facts.

His capacity for meditation, both in intensity and duration has probably never been equalled . . . It was a comparatively easy matter for him to get his mind, as it were, fully under way. And he could maintain this state, an almost trance-like condition, for many hours at a time.—From the late J. W. N. Sullivan's biography of Isaac Newton.

Facing Tomorrow

THERE is some significance in the type of sign a man places at his door. In many ways he tells a great deal about himself when he selects the size and shape of his name-plate. It is his trade-mark of personality.

Recently we heard a remark made by a man who has visited many hundreds of dentists. He said that he had arrived at the position where after he observed a man's sign and looked over his waiting-room there was no need to really meet the dentist for he already knew him. Until then we were of the opinion that we simply were possessed of an obsession on the subject but there is undoubtedly an element of truth in the statement.

In one of our cities there are almost side by side two rather salient signs. The one is a small brass plate about four by eight inches with lettering approximately one and one quarter inches in height. Underneath the name in slightly smaller letters we were surprised to read the word "Plumber." Just a door or so away is a sign many times larger, lettering of name at least four inches in height and underneath in letters slightly larger, the word "Dentist," in addition we might add the feature of illumination. The comparison is not offered in the spirit of degrading criticism but we must admit that

as we passed on we did have the thought go through our mind—which is the trade and which the profession. Furthermore, would it be speculating too much to think that the general public might ask some similar query.

All of us no doubt at some period, perhaps just after graduation, thought that one of the most important things about us was our name, especially with its new appendage. It took us a few years to learn that our name only meant anything to anybody after we had proven our ability to render real service. When that period of transition arrived, we decided to tear down the old name-plate and if replaced at all, to put up one with less prominence to ourselves. Others never seem to arrive at the place where they can fairly estimate themselves. They change their sign but if at all possible enlarge or illuminate it, still believing that the public are interested in that beloved name.

The late Justice Holmes of the Supreme Court of the United States gave us some bright, intelligent and witty sayings. He once said: "The narrower the mind, the broader the statement." This statement might quite aptly be turned about and applied to the signs placed at the entrance to some dental offices. "The broader the sign, the narrower the ability."

NEDREW TELLUG.

A British neurologist made three tests of the strength of three men. In the first test, the average grip of the three was 101 lb. In the second test, made under hypnosis, with the experimenter telling the men they were weak and lacked any power to speak of, the average grip of the three was 29 lb. In the third test, also given under hypnosis, but with the experimenter this time impressing the men with the fact of their superior strength, the average grip of the three was 142 lb.

In other words, the men only used 101 out of 142 parts of their potential strength. The maximum was attained when they believed in their own power.

—Your Life (U.S.A.)

The Forum

• ALLERGY IN DENTISTRY

by ALBERT H. ROWE, A.B., M.S., M.D.

ALLERGY is a defensive mechanism of the body allied to immunity which results in abnormal reactions in tissues to substances which cause no reactions in normal individuals. The allergen is usually a protein. Chemicals like mercury or aspirin may also combine with body protein and cause sensitization. Thus, practically any substance which encounters body tissues by ingestion, inhalation, contact, injection, or through infection may cause sensitization.

All people are susceptible to allergy. Thus bacterial allergy develops in every one as in scarlet fever or tuberculosis. Food, pollen, and other inhalants cause severe symptoms in 10 to 15 per cent of all people, and less severe symptoms in about 50 per cent. Allergy in the progenitors predisposes to allergy in the child.

Allergic manifestations tend to localize. Thus patients may have asthma, hay fever, eczema, migraine, or gastrointestinal symptoms with or without other tissue involvements. The symptoms tend to cyclic recurrence or exaggerations and may be mild, severe or dramatic in type.

The oral cavity is frequently the site of localized allergy. Other allergic manifestations discussed above may or may not be present. Foods, drugs, various things contacted, and bacteria may cause such allergy.

Cheilitis, either acute or chronic, with erythema, edema, vesiculation, oozing, and crusting may be due to allergy, usually of the contact type. Ingredients in mouth washes, tooth pastes, dental floss, cigarettes, foods, contacted metallic or lacquered articles, or medicines may cause

cheilitis. Dyes in lip stick, especially tetrabromfluorescein and azo dyes are common causes. Ephedrine dropped into the nose may cause allergic reactions in the nasal tissues, the skin, and the mucous membrane of the lips. Perfume or polishes from nails applied to the lips might be causative. Essential oils or hexyl-resorcinol in tooth pastes have caused cheilitis, gingivitis, and stomatitis. Patch tests in the skin with suspected substances often in 24 to 48 hours cause erythema or vesiculation indicative of allergy.

Perleche, characterized by thickening, desquamation, maceration, or fissuring in the corners of the mouth is often due to allergy to foods and at times to contact allergy. Deficiency in riboflavin, one of the B complex vitamins, at times causes cheilitis and perleche.

The lips are often the site of hives or angioneurotic edema due to food and less often to drug or bacterial allergy.

Recurrent cold sores on the lips may arise from food or drug allergy rather than infection. Swellings from insect bites on the lips or other skin areas are recognized allergic reactions. Lips irritated by sun or wind exposure may be potential areas of food allergy.

Stomatitis and gingivitis may be due to food or drug allergy as well as to infection, or irritations from carious teeth or poorly fitting caps or dentures. Allergy to dentures and metallic fillings also arises as discussed below. Healy, in 1934, and Healy, Daley, and Sweet in 1936 reported gingivitis, stomatitis, periodontoclasia, and localized pyorrhea from food allergy, and in one case from contact allergy to silk in dental floss.

Glossitis may arise from similar allergy. Burning of the tongue, or glossodynia

necessitates the consideration of possible allergy. Itching of the palate or tongue often occurs in hay fever. Swelling of the tongue and oral mucosa may occur from food allergy alone or with other edema in the throat, nose, or face. A trace of egg caused pricking and burning of the tongue and lips and pharyngeal eruption. A metallic taste occurred in a patient with sick headaches, both relieved by food eliminations. The geographic tongue frequently occurs in allergies. The erosions, ulcers, leukoplakia, and whitish patches on the tongue and oral mucosa from the galvanic reactions between amalgam, gold or steel fillings and dentures as described by Lain must be recognized, but are not due to allergy. So-called post nasal drip and mucous are often due to allergy especially due to foods. Pharyngeal congestion, inflammation, edema, and even vesiculation involving the tonsillar pillars, tonsils, nasopharynx, soft palate, and uvula may arise from food or drug allergy. Such swelling or irritation may be severe and has incorrectly in the past been attributed to recurrent infection.

Aphthae or canker sores in my experience usually are due to food and at times to drug or denture allergies. They are similar to hives on the skin. They may be cyclic or chronic, superficial or deep. Those which occur with menstruation are due to allergy exaggerated by the period and not due to endocrine causes. When canker sores are secondarily infected, serious inflammations arise, and in infants, death may even result.

Vulcanite and other synthetic dentures may produce allergic stomatitis or gingivitis with redness, congestion, vesiculation, blebs, excoriations, cracking, and oozing. Allergy to a single dye, mercury, rubber, or other mineral substances in the dentures may be responsible. Patch tests on the skin with the various dentures or their ingredients will often reveal the

causative allergical substance. Rattner has reported allergic stomatitis from synthetic hecolite evidenced by patch tests. I have seen two such cases.

Agranulocytosis characterized by severe ulcerative and gangrenous stomatitis, leucopenia, and disappearance of the granular cells from the blood is probably due to allergy in the blood-forming cells in the bone marrow. Amidopyrine especially is causative, although arspenamine, gold salts, cinophren, dinitrophenol, and sulphanilamide have been responsible.

Purpura, erythema nodosum and multi-forme usually occur in the skin but may occur in the oral tissues and may be due to food or drug allergies.

Drug allergy may produce macular, vesicular, edematous, pigmented or non-pigmented lesions in the tissues of the mouth, associated with erosions, ulcerations, or haemorrhages. They may be due to drugs absorbed from the stomach, carried by the blood to sensitized tissues in the mouth or to contact reactions with the drugs. The acetanilide antipyrin drugs, the barbitol, salicylic and halogen groups of drugs especially may cause allergy.

Phenobarbital may produce oral lesions along with dermatitis. Acetylsalicylic acid especially may produce edema of the face, eyes, lips, and mouth. Iodide and bromine compounds are likely to result in bullous, haemorrhagic, edematous lesions. With iodine allergy the slightest trace will cause oral and at times generalized cutaneous lesions. Phenolphthalein is apt to produce blebs, vesicles, erosions in the oral mucosa and burning and tingling of the tongue. It occurs, of course, in pink dentifrices, mouth washes, candies, foods, and laxatives.

Allergy to various anaesthetics and antiseptics may produce oral and especially cutaneous manifestations in the patient, dentist, or his assistants. Novocaine, procaine, lutyn, apothesine must

be suspected. Dermatitis of the hands of the dentist from such compounds is not uncommon. Formaldehyde, phenol, cresol, thymol, chlorine, and their compounds may cause localized oral allergy. The dentist by questioning the patient about various mouth washes, dentifrices, antiseptics, medicines taken by mouth or injection can often discover the causative drug.

Orthodontia is necessary in many children due to nasal allergy from inhalants and especially from foods which cause blocking of the nose, mouth breathing, a high palate, a narrow and protruding upper dental arch, and at times an open bite. With proper treatment of nasal allergy and hay fever, orthodontia, moreover, becomes more successful and the results more permanent.

Allergic children are often nervous. They are restless, sleepless, thrash around in bed, gritting and grinding their teeth. This is especially common when nasal allergy blocks the nose and causes mouth breathing. Headaches and neuralgia, tenseness in the back of the neck and shoulders may be due to allergy in the cerebral or peripheral nerve tissues.

Food allergy may disturb peristaltic activity, cause reversed peristalsis which often accounts for the coated tongue and bad breath. The odour from fermented or infected food and mucous under overhanging fillings and dentures of course commonly causes foul breath.

Asthma and nasal allergy and more frequently urticaria may arise at times from allergy due to bacteria in apical abscesses, infected gums or cavities. The dentist's technique is most important to the allergist in such patients.

Thus the dentist must be alert to the possibilities of allergy from foods, drugs, contactants, and bacteria as causes of the allergic manifestations discussed in this paper. That infections, injuries, burns, chronic diseases such as diabetes, endoc-

rine and vitamin deficiencies are responsible for oral lesions similar to those described above must be remembered. Allergy, however, always needs consideration.—*The Contact Point, Sep., 1940.*

• LEGAL ASPECTS OF RADIODONTICS

by A. P. S. SWEET, D.D.S.

(Condensed from the *American Journal of Medical Jurisprudence*.)

SOME may think that there is little danger of malpractice suits for the average dentist, but "no one knows where lightning will strike." During periods of unsettled economic conditions such actions multiply because the need for money causes some people to try means they would not attempt in ordinary times.

There is perhaps no more important type of evidence in defending a malpractice suit than x-rays. The quality of the x-rays must be good. The second essential is the use of a sufficient number of films to tell a complete story. The third essential of x-ray evidence is that the dentist be able to identify his films.

The question of ownership of x-rays is often raised. The courts have definitely ruled that they are the property of the dentist making them. There is, however, one exception. When a patient is referred to dentist "A" by dentist "B" for x-ray examination, dentist "A" acts merely as the agent of dentist "B."

Not only may the court hold that a physician or dentist is negligent for failure to use x-rays but also in not having x-ray apparatus available. A resolution passed by the Section of Pathodontia of the First District Dental Society of the State of New York on December 17, 1928, condemns as questionable practice the failure to use x-rays as an aid in diagnosis and during the process of treatment of pulpless teeth.

The prudent dentist will treat every case as though it may some day be

brought into court—he will have a thorough x-ray record of each case.

There is still another aspect of dental responsibility. All legal authorities point out that the consent of the patient is necessary for any dental operation. He must be told what is best for him and if he does not refuse, assent is implied.

Bede Scott, in *Medical Economics*, gives a list of five rules that will help a dentist to avoid malpractice suits. They are:—

1. Use tact. Don't wait until trouble develops. Tell the patient frankly what you fear.

2. Watch the relatives. Bad feeling is traceable in an amazing number of cases to brusque treatment of some nosey but well-meaning relative.

3. Keep records of everything. Trial lawyers make much of slight omissions.

4. Place the responsibility. If you order x-rays and the patient demurs, then is the time—not later—to make a record of it. Write the patient a letter (and keep a carbon copy), reminding him that the responsibility will be his if the x-ray examination is not made.

5. Don't get excited. One physician actually came to blows with the son of a patient, who had baited him into a quarrel.

A Michigan court covers this angle of prevention in a decision rendered in 1935:—

"... in the event of a malpractice suit against a physician or surgeon, the x-ray negatives which he has caused to be taken and preserved incident to treating the patient might often constitute the unimpeachable evidence which would fully justify the treatment of which the patient was complaining."

Only when the dental profession as a whole has adopted these safeguards will malpractice and nuisance suits be reduced to a minimum. — *Condensed from Dentistry, a Digest of Practice.*

• ORAL MEDICINE

by HERMAN BECKS, M.D., D.D.S., Univ. of California, San Francisco, Calif.

MUCH has been said in recent months of Dental Medicine, or, as it is frequently called, "Oral Medicine." There are only a few universities on this continent that have organized departments with adequate staffs to teach this rather new and progressive field of general dental practice. Several years ago, Arthur Black explained that the development of dentistry embraced four distinct eras: First, the era of extractions, when practically all dental ailments were cured by the elimination of teeth; second, the era of William Hunter, when many systemic diseases were believed to be the result of dental foci of infection; third, the era of G. V. Black, who designed instruments for the conservative treatment of various pathologic conditions of the teeth and their surrounding structures and at the same time proposed and introduced definite operative procedures to reach this goal; and now, we are entering the fourth era—the era of dental medicine, which brings before us the great importance of the influence of a large number of systemic disturbances, which leave more definite landmarks in the oral cavity than is ordinarily thought, and make the mouth to a large extent a "health barometer." Furthermore, many pathologic conditions of the teeth and other oral structures as well as jaw bone may have a profound influence on the physical well-being of the patient.

This statement of Arthur Black explains fully the present trend of dental education and the broadening of the field of dental practice. Let us realize that the time has passed when we adhered to the dogma that "treatment and cure of any dental ailment rests primarily with mechanical operative procedure." Many of us in dental practice today are still convinced that our main function is that of repair

and replacement, disregarding the great possibilities the profession offers in serving our people as thoroughly trained experts in the biologic changes to be observed in the oral cavity and thereby rendering a service which excels by far our present limited field of practice. How often have we experienced in the past the continuation of dental decay processes in spite of the highest digital skill with which restorations were made. The decay may have stopped in the areas which were restored; however, every year more tooth surfaces become involved, possibly at the slow rate of only one or two cavities a year. Naturally, we would not be greatly alarmed about such a condition, because in the end that is our daily bread. If, however, the cavity margins suddenly begin to crumble, our restorations become defective and have to be renewed, possibly simultaneously with the occurrence of twenty or thirty new cavities in a year, then we begin to wonder which "aetiologic factor" might be responsible and whether the same factor operates to cause the customary one or two cavities a year. Then we become alarmed and try to determine the reason for it, i.e., we try to blame obscure or possibly systemic irregularities and to place the responsibility on the patient. Shouldn't we admit our shortcomings in not realizing or studying the possible relationship of general health to dental structures? Have we adequately considered the possible influence of a high carbohydrate intake and increased lactobacillus counts, as has been found by the Michigan and California Groups, or the effects of hormonal disturbances on the teeth, alveolar bone structure and gingival tissues? Each patient presents an individual problem and even though, on the surface, it appears that the uniform clinical aspect of "cavities" requires only one uniform therapeutic procedure of placing "fillings," today it must be realized that the

causative factors may be manifold and require "individualization" for a successful therapeutic result. These same principles apply to practically all dental and oral disturbances. Even though we may not be satisfied with our present understanding of the aetiology of caries, periodontosis, dentofacial anomalies, etc., it should be our duty to realize that most of our practice procedures today are symptomatologic, i.e., they deal with the treatment of symptoms and not with the causative factors.

It may well be added that even though in many instances the aetiology of oral conditions is obscure, an earnest effort on our part to learn and to understand certain fundamentals of preventive medicine, will uncover, in a large percentage of cases, the actual causative factors. For this, we need a better knowledge of dermatologic lesions of the face and mouth, pathologic conditions of ears, nose and throat, the relationship of endocrine disturbances and dietary deficiencies to epithelial and connective tissues (because the teeth and surrounding structures are composed of them), general metabolic disorders, systemic diseases and certain constitutional anomalies. The field of pediatrics in addition offers a wealth of knowledge which is essential to understand the many problems of the child's growth and development and which of course include the jaws and teeth. This study and the correlation of these and of many other fundamental phases of internal and preventive medicine and their use in every field of dentistry means to us "Dental Medicine." It is, to a large extent, "preventive dentistry" and its development in our universities and institutions has become a prime necessity for the progress of our profession and the welfare of our American people.—*Dentistry, a Digest of Practice.*

• IS DENTISTRY A BRANCH OF MEDICINE?

by J. IRWIN ESSIG, D.D.S., Louisville, Ky.
(Condensed from *Dental Items of Interest*,
Jan., 1941.)

IT IS common knowledge today, that the dental condition of a person affects the general health of a host of organs and tissues. We see then that dentistry and medicine are co-related in a vague but nevertheless concrete manner. Almost everyone admits that the dentist should know something about the various organs of the body and its associated structures. In fact he must have nearly as much general knowledge of medicine as does the medical practitioner. Even our medical friends admit—with a smile of tolerance—that dentistry is closely associated with and allied to medicine.

It would seem then that the title question has been satisfactorily answered, but alas, this is not the case. As dentistry is regarded today it is definitely a branch of medicine, but we are confronted with a few facts that seem to point in some other direction. It is perfectly true that the dentist of today is exposed to the varied medical courses in order to better prepare himself, but why is not the converse true? The members of the medical profession are in a colossal void concerning matters dental in character. How then can a branch claim connection to a tree when the branch is foreign to the tree? Everyone concedes that dentistry is related to medicine but we know that it is a poor relative at best. Dentistry is then placed in that unenviable light of an upstart claiming relationship to a more illustrious institution. Why should this be the status quo? I admit that it is very natural for a young profession to stabilize itself by trekking along with one better established, but it is wrong nevertheless. Dentistry will never be wholeheartedly accepted as a branch of medicine until its practitioners have been doctors of medicine before entering the specialized

field of dentistry. How can anyone call a man a special type of medical practitioner when that man is not authorized to enter its general field. We see then that we are travelling in the wrong direction.

Let us analyze the causes of this unnatural affection for medicine assumed by dentistry. Medicine is riding atop a name of popularity and respect. As a life work it is altogether ideal. Its aims are wholly idealistic although its means for achieving them are not always so—and, in general, it presents a very able and dignified aspect to the layman. Now dentistry lacks much of that possessed by medicine. Although its aims are as noble as those professed by medicine, they seem to be of a slighter nature and are therefore overlooked. It must be bluntly admitted that dentistry is generally considered to be on a lower plane than that enjoyed by medicine. What could be more natural than an attempt on the part of dentistry to be connected with this delicious morsel of respectability? And in a like vein, what could be more natural on the part of medicine to prevent this desired union?

Into what haven can this foundling go? Exactly what shall it be called? Mechanics are too lowly and medicine too lofty to be associated with it. There must be some niche into which it can be placed. Has it ever occurred to the powers that be in dentistry to carve one for itself? This is no mere theoretical chimera. It has been done many times before and when dentistry is cured of its parasitic tendencies, it shall be done again. For example no one would call an engineer a mechanic, neither would he call him a physicist. Yet the engineer deals intimately with both professions. Engineering has attained its own particular pedestal upon which it is no degradation to do manual labour seasoned with scientific knowledge. It is fair, in view of

this prototype, to demand the same in dentistry. It may be said that dentistry is too young to stand alone, and to this I offer no argument. It may be so. I ask for no radical upheaval in the philosophy of the profession, but I do ask for a cessation of this cringing and bowing to the god of medicine. It is as unseemly as it is futile.

Is dentistry a branch of medicine? We have that question before us still. In view of the foregoing, I shall answer negatively. Dentistry is that correlation of medicine, art and mechanics, so blended and fused to produce a profession altogether individual and alone. It is a branch of neither. It must continue on its own merits laying new foundations upon which the generation of tomorrow can further build and thereby add new laurels to a profession that is distinct and honourable, capable of upholding its own dignity and rightful place in the realm of health.

• CHILDREN'S DENTISTRY

by WALTER T. McFALL, D.D.S.
(Excerpt from *West Virginia Dental Journal*.)

I AM not suggesting that you make your dental office a day nursery or your operating room a fairyland, but I am telling you that a child's corner, with a couple of small chairs, or a child settee, appeals, attracts and encourages. The child feels more at home, is comfortable, and mother and family friends mention your children's nook more often than you realize. Books for children, gold-fish aquariums, blackboard and chalk, wall paper pictures, with a timely faddist connection, all proclaim your interest in and understanding of children. Should I mention the all importance of: (1) Never keep a child patient waiting more than twenty minutes. (2) Try to take children one after another, instead of alternating with adults. (3) As far as possible, know something about the child before

he comes to your operating room—his age, hobby, name, and why he is coming to you. (4) Have children come early, regularly and often, beginning at two years of age. Allow them to accompany mother, to visit, instead of first coming as a patient. (5) Talk to a child in his language, use pictorial displays, charts and models. (6) Never embarrass a child before a third person. (7) Insist upon the child patient coming for morning engagements, not late in the afternoon when exhausted. Try to make a friend and booster of the child instead of a knocker and frightened procrastinator of future visits to the dentist.

• THE ROLE OF VITAMIN C IN WOUND HEALING

by ALAN H. HUNT, *The British Journal of Surgery* 28: 436, January, 1941.

IN WOUNDS that break down in spite of every attention at operation there is usually a nutritional deficiency affecting the proliferating powers of the cells or the capacity of the mesodermal cells to lay down intercellular substances. The cellular proliferation begins after a latent period of a few days and is accompanied by active phagocytosis of tissue which has been damaged or rendered functionless by incision.

One thousand milligrams of ascorbic acid, daily for three days, is enough to produce saturation even in a grossly deficient patient, and 100 mg. daily is enough to maintain it.

The normal intake of vitamin C should be 50 mg. daily. Few of the poorer classes of this country consume more than a fraction of that amount and yet they remain in good health.

Vitamin C has been shown to be of the greatest advantage in wound healing. Patients should be saturated before operation. —T. J. Cook, *per Am. Jour. of Ortho and Oral Surgery*.

• **GENERAL KNOWLEDGE TEST**

- (1) If you had a fibroma would you
 - (a) Eat it
 - (b) Sell it
 - (c) Give it to the cat.
- (2) If you had an abscess would you
 - (a) Tell your dentist
 - (b) Tell your doctor
 - (c) Tell your A.R.P. Warden.
- (3) Vincent's Angina is
 - (a) A heart disease
 - (b) A cocktail
 - (c) Hitler's secret weapon.
- (4) A professor is
 - (a) A lecturer
 - (b) A pain in the neck
 - (c) The answer to a maiden's prayer.
- (5) Ishbell is
 - (a) A form of dental caries
 - (b) A town in Scotland
 - (c) God's gift to man.

—Univ. of Durham, School of
Medicine Gazette.

THE NEIGHBORS

—By **GEORGE CLARK**



"He's a good dentist, but I'm tired of hearing him tell about his troubles. Even when he's drilling my teeth he wants me to sympathize with him."

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PRINCE EDWARD ISLAND

SASKATCHEWAN

Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S



D. T. Wayne, Charlottetown

QUEBEC

ONTARIO

F. C. Harwood, Moose Jaw

NOVA SCOTIA



E. M. Laurin, Montreal



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ALBERTA

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BRITISH COLUMBIA



Harry H. Peters, Saint John

J. S. Bricker, Vancouver

Accomplishments of Advanced Age

Emerson said, "The test of civilization is not in the census, nor the size of the cities, nor the crops; no, but the kind of man the country turns out." Who can estimate the value of a well-lived life? One might write much about the accomplishments of youth, the attainments of middle life, but in this short article I wish to refer to the crowning of old age. Disraeli said, "The disappointment of manhood succeeds to the delusion of youth: let us hope that the heritage of old age is not despair." Perhaps too often the heritage of old age is despair but this should not be and would not be if we followed the advice of Charles Kingsley; "Do noble things, not dream them all day long, and so make life, death, and the vast forever, one grand, sweet song." "Blessed is he who has found his work," says Carlyle. "Let him ask no other blessedness. He has a work—a life purpose; he has found it, and will follow it."

Lord Kelvin invented improvements in his marine compass when he was eighty-three. John Wesley was still preaching almost every day at eighty-eight. Robert Bridges, the English poet, published his most ambitious poem at eighty-five. William E. Gladstone was Premier for the fourth time from

eighty-three to eighty-five and made addresses on the Armenian massacres at eighty-seven. Sir Oliver Lodge wrote magazine articles at eighty-three. Sarah Bernhardt, the famous French actress, scored a new success in "La Gloire" at seventy-five and in "Regine Armand" at seventy-six. Luther Burbank had more than three thousand extensive experiments under way at seventy-seven. Georges Clemenceau, the French "Tiger", published "Demosthenes" at eighty-five and "American Reconstruction" at eighty-seven. Leonardo da Vinci was seventy-seven when he painted his "Last Supper." "It is indeed a finer thing to be nobly remembered than to be nobly born."

But we do not have to go outside the ranks of our Canadian dental profession to find men, well advanced in years, serving humanity with the efficiency born of experience and with the intensity of youth.

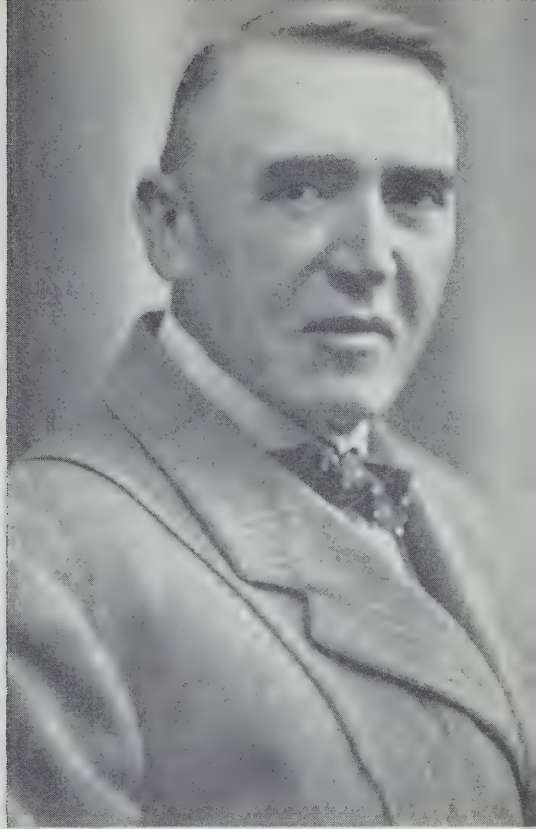
Dr. Aimé Lantier, of Quebec City, is still practising dentistry at the age of eighty-one and is director of the Municipal Dental Clinic founded by the Rotary Club. He studied with Doctors Prestler and Globensky in Montreal and later, at the New York Dental College. He was graduated in Montreal in 1884. He was given a degree *honoris causa* by the University of Montreal upon his 50th anniversary of active practice.

Dr. Fredrick Arthur Denne, of Stayner, Ontario, has seen fifty-seven years of active dental practice and still attends to his practice regularly. He will be seventy-nine years of age in a few weeks and has no thought of retiring at present.

Dr. L. D. Keown, of Moosomin, Saskatchewan, is eighty-two years of age and is in his office every day. He is in good health but feels that it is about time to retire and would like to sell his office equipment to a younger man. Dr. Keown moved to Regina in 1886 when there was no dentist between Brandon and Calgary, a distance of 699 miles and has been practising ever since, just fifty-five years. Later he moved to Moosomin. Dr. Keown served on the Dental Council of Saskatchewan for twenty-five years and at the last meeting of the College of Dental Surgeons of that province was made an honorary member.

Dr. George F. Bush, of Winnipeg, Manitoba, is in his seventy-ninth year and is in active practice daily. He is now in his fifty-sixth year of dental service. Dr. Bush is a Past President of the Canadian Dental Association, the Dominion Dental Council and the Manitoba Dental Association. He was a member of the Board of Directors of the Manitoba Dental Association and representative in the Dominion Dental Council for twenty years. He was a judge of Fine Arts and Handicraft, Provincial Exhibition, for twenty years. He is a holder of a medal for original water colours. Dr. Bush is still organist and choirmaster at St. Michael's and All Angels Anglican Church, a post he has held for over thirty years.

There are, no doubt, other dentists in Canada who have reached the age of those mentioned but their names are not available at the moment.



A. J. GARESCHE

There are many dentists who have almost reached this group, men who are rendering a great service to humanity. I would like, at some time, to dwell upon their virtues and accomplishments.

There is one other man, however, to whom I wish to refer specially. Last June I had the privilege of meeting Dr. A. J. Garesché, of Victoria, British Columbia. It is said that dentistry is a young man's profession and so often do we hear of the older man who has to admit that his practice is slipping and gives as the reason that the young men have enticed away his patients, a mistaken reason as a rule, but believed nevertheless. But not so Dr. Garesché who is one of the oldest dentists in Canada still in active practice. Dr. Garesché is eighty-one years of age and still practices each day in his office with the help of an assistant and a technician. He practises, not of necessity, as he owns the Garesché building in which his office is located, but because he just loves dentistry, feels fine and sees no reason why he should not continue to serve humanity, as he has done for the past sixty years, as long as he has a keen eye, a steady hand and sound judgment. He commenced practice in Portland, Oregon, in 1881, later graduating from the University of Pennsylvania in 1887, being one of a class of sixty-four. For a while he practised in Cuba but in 1895 moved to Victoria where he has been in active practice ever since. When I visited Dr. Garesché he seemed most active and healthy and looked not a day older than sixty-five.

He showed me some beautiful porcelain inlays which he had inserted recently. Porcelain work is a hobby of his and he still gives clinics at dental meetings on the making of inlays and jacket crowns. This Canadian dentist, at the young age of eighty-one, is still not satisfied to rest on his laurels but is ever anxious to increase his knowledge and efficiency, so last year he attended night school to take a course in metal turning. He believes the old adage that all work and no play makes Jack a dull boy, so three times a week he plays eighteen holes of golf. Above all, he is highly respected by his confrères. "Some people build as cathedrals are built, the part nearest the ground finished; but that part which soars towards heaven, the turrets and the spires, forever incomplete." Dr. Garesché is working on the uppermost points of the spires of his well-rounded dental life and has a magnificent structure to offer as a model to the younger dentists of Canada.

Thackeray says, "Nature has written a letter of credit upon some men's faces which is honoured wherever presented. You cannot help trusting such men; their very presence gives confidence. There is a 'promise to pay' in their very faces which gives confidence and you prefer it to another man's endorsement." "I fear John Knox' prayers more than an army of ten thousand men" said Mary Queen of Scots. Character is power. I realized this when I visited Dr. Garesché in his office. I remembered, too, Gladstone's words, "Don't let your heart grow cold, and you shall carry youth with you into the teens of your second century." Not all kings are crowned. Longfellow refers delightfully to the accomplishments of old age in the following lines:—

"Ah, nothing is too late
Till the tired heart shall cease to palpitate.
Cato learned Greek at eighty; Sophocles
Wrote his grand Oediphus, and Simonides
Bore off the prize of verse from his compeers,
When each had numbered more than four score years.
And Theophrastus, at four score and ten,
Had but begun his 'character of men.'
Goethe at Weimar, toiling to the last,
Completed Faust when eighty years were past.
These are indeed exceptions; but they show
How far the gulf-stream of our youth may flow
Into the arctic regions of our lives
When little else than life survives."

The great Big Black Things that have loomed against the horizon of my life, threatening to devour me, simply loomed and nothing more. The things that have really made me miss my train have always been sweet, soft, pretty, pleasant things of which I was not in the least afraid.

BOOK REVIEWS

Pathology for Students and Practitioners of Dentistry by William E. Ehrich, M.D., Associate of Pathology, School of Medicine, University of Pennsylvania. 509 pages. Illustrated with 234 engravings. Published by The MacMillans in Canada, St. Martin's House, Toronto. Price \$6.50.

The material in this book is arranged according to such principles as heredity, infections and inflammation rather than following the structures of the mouth in an anatomical order. An effort has been made to include the general principles underlying disease as well as to cover the special pathology of the mouth, including the salivary glands, tonsils, and pharynx. Such organs as the heart and kidneys have been dealt with only when considered important to the dentist.

The chapter headings will give a clear conception of the subjects covered. They are: Hereditary and Hormonal Disturbances; Allergy; Constitution; Predisposition and Diathesis; Disturbances Due to Trauma, Radiant Energy, Poisoning; Inadequate Supplies of Oxygen, Water, Proteins, Fats, Carbohydrates, Inorganic Salts and Vitamins; Infection; Development; Growth; Metabolism; Circulation; Disturbances in Defense (Inflammation) as Stomatitis, Tonsillitis, Pharyngitis, Sialoadenitis, Pulpitis, Parodontitis, Osteomyelitis, Arthritis and Lymphadenitis.

The book is splendidly printed, is concise and should prove most instructive to practitioners of dentistry as well as to students. For those who wish to delve much deeper into some of these subjects a very large number of

references are given relating particularly to recent publications.—*M. H. G.*

Accepted Dental Remedies by the Council of Dental Therapeutics of the American Dental Association. 7th Edition. 309 pages. Published by the American Dental Association, 212 East Superior Street, Chicago, Illinois, 1941. Price \$1.00.

This book lists and describes those pharmaceutical articles which stand acceptable to the Council on Dental Therapeutics of the American Dental Association. The list includes those official drugs and preparations which are considered to be of greatest usefulness in the field of dentistry and non-official articles marketed in conformity with the rules of the Council.

The Council expresses the hope that this book may serve as a useful guide to the practising dentist in his choice of medicaments and to the students and teachers of materia medica and pharmacology.

As far as possible all errors have been corrected. Portions of some of the monographs have been altered in the light of present information while others have been re-written. Some products have been deleted and some added. Illustrative of the value of frequent revisions is the fact that the Council has presented through this book the present status of many problems relating to nutrition.

In spite of rising costs the price of this book remains at the old level of \$1.00 and so should find its way into the hands of the dentists of Canada.—*M. H. G.*

DENTAL CORPS NEWS

Dental Ambulance Presented

A dental ambulance was presented to the Canadian Dental Corps on October 10 at a ceremony at Fletcher's Field, Montreal, with 3,000 in attendance. This was the gift of the Canadian branches of the Workmen's Circle and the gift was presented to Lt.-Col. C. B. Climo, D.C.M., E.D., by Joseph Weinberg, of New York City, national president of the Workmen's Circle.

No. 32 Company, Regina

Lieut. R. Bruce Cameron of No. 32 Coy., Regina, was married to Miss Norine Johnson at the home of her father, Mr. LeRoy Johnson, K.C., Moose Jaw, on September 20.

Many invited guests from Moose Jaw and outside points were there for the ceremony, which was conducted by the Rev. Ian McEown. He also proposed the toast to the bride, which was splendidly responded to by the groom.

Lieut.-Col. G. L. Cameron and Mrs. Cameron, father and mother of the groom from Ottawa, were in attendance, and some seven other Officers of the Dental Corps were there for the occasion.

Lieut.-Col. G. L. Cameron, while on leave in the West, paid visits to C.D.C. clinics in Regina, Saskatoon, and Swift Current.

The Employment of Female Dental Assistants in the Canadian Dental Corps

Dental assistants across the country will be pleased to know that arrangements have recently been made whereby they are eligible for employment in clinics of the Canadian Dental Corps in this country.

There is no dental nursing service, as such, and for this reason it is impossible to enlist in the Canadian Dental Corps. It is necessary for those wishing to serve to join the Canadian Women's Army Corps (C.W.A.C.).

It is to be understood that only male assistants may proceed overseas with the dental detachments. Therefore, it is not possible to employ so many women that the training of

male reinforcements would be interfered with. Also, it is necessary to employ them only in centres where at least twelve C.W.A.C. personnel are together on account of living conditions.

The Regulations provide that women employed as chair assistants will first be taken on strength as recruits or volunteers (classified) but may reach the rank of Sergeant if they prove proficient. Provision has also been made for the granting of trade pay on passing certain Trade Tests in connection with their work. This means that within a reasonable length of time a good chair assistant would receive \$60.00 a month in addition to being provided with clothes, living accommodation and rations, and free medical and dental treatment.

Those wishing to serve must first interview the District Dental Officer at the Headquarters of the Military District in which they reside. They will be required to show that they have had previous experience as a dental assistant.

The District Dental Officer will be able to furnish any other information regarding pay, clothing allowance, etc., and also to instruct them with regard to submitting their application for enrolment in the C.W.A.C.

NEWS FROM THE PROVINCES

QUEBEC:

Annual Fall Clinic

The Seventeenth Annual Fall Clinic of the Montreal Dental Club was held at the Mount Royal Hotel, September 24-26, and a splendid program was provided. The following officers were in charge: Chairman, Dr. J. K. Carver; Director, Dr. M. L. Donigan; Secretary, Dr. A. D. Richardson; Treasurer, Dr. R. B. Bell; Exhibits, Dr. J. A. Carney; Registration, Dr. R. B. Bell; Local Arrangements, Dr. H. C. McNabb; Reception, Dr. A. D. Angus.

Dr. J. K. Carver, President of the Montreal Dental Club, gave the Address of Welcome. Other speakers were, Dr. Frank W. Rounds, of Boston, on "Exodontia;" Dr. Mark D. Elliot, of Boston, on "Dentistry for Children;" Dr. H. A. Baxter, of Montreal, on "Plastic Surgery;" Dr. P. L. Chevalier, of Richmond, Va., on "Complete Dental Rehabilitation;" Dr. I. H. Ante, of Toronto, on "Essential Factors for Complete Denture Procedure;"

Dr. E. H. Smith, of Philadelphia, on "The Use of Acrylates in Operative Dentistry and in Crown and Bridge Prosthesis." Dr. R. R. Dagleish, of Sydney, N.S., showed a motion picture entitled, "Why Not be Different" featuring ethyl chloride as a local in operative dentistry and as a surface anaesthetic, also including simplified sterilization, office layout and equipment, gadgets, etc. The following papers were presented by members of the Toronto Academy of Dentistry: "Personality and Personnel in a Dental Office" by Dr. J. A. Bothwell; "Case Analyses, Case Presentation and the Handling of Patients" by Dr. C. McLean; "Accounting Records and the Proper Financial Management of a Dental Practice" by Dr. G. V. Morton.

This splendid program which was so well balanced and so efficiently carried out in spite of strenuous war conditions was greatly appreciated by the large number in attendance.

Resolution

The following was passed by the Mount Royal Dental Society at its General Meeting on September 16, 1941.

WHEREAS, the Canadian Dental Association is the only legal body able to represent nationally and internationally the professional opinion of all Canadian dentists, and,

WHEREAS, the Canadian Dental Association has as its prime function the welfare of all dentists in matters such as, education, prestige, publications, imports, taxes, illegal advertisements, illegal practice, etc., and,

WHEREAS, the executive committee of the national organization finds, from past experience, that with its present financial income, it cannot maintain offices to adequately represent and protect the dental profession, and,

WHEREAS, the members of the Mount Royal Dental Society, as licentiates of the Quebec College of Dental Surgeons, enjoy the advantages of membership in the national organization, and desire to maintain its efficiency to its utmost capacity.

Be it resolved, therefore,—That the Mount Royal Dental Society urge the Quebec College of Dental Surgeons to co-operate with our sister provinces by legislating to increase the provincial dues by a sum not to exceed four dollars; to confer with the representatives of the national organization and mutually arrange to allow the Canadian Dental Association such increased sum of money as may be deemed necessary to represent the full duty of the dentists of the Province of Quebec.

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Junior League

The Junior League Dental Clinic at the Griffintown Club was one of the projects which received benefit from the Alec Templeton concert in the Plateau Auditorium on October 2. The League contributes to the operation of the Clinic \$1,000 a year, the project now being in its eighteenth year. Six volunteers from the League assist the three dentists. Clinics are operated in the morning for school children, from September to May, and in the afternoon for members of the Griffintown Club. About 150 patients are treated each month.—*Montreal Star*.

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Dental Nurses and Assistants

The Montréal Dental Nurses' and Assistants' Association held its meeting in conjunction

with the Montreal Dental Club Fall Convention at the Mount Royal Hotel on September 24-26.

The meeting was officially opened by Dr. J. K. Carver, President of the Montreal Dental Club, and presided over by the President, Miss Ardis Crowell. There was a registration of 40 and the members attended several of the doctors' lectures.

At the Wednesday Luncheon, Lt.-Col. Climo was the guest speaker and he was introduced by Miss Bonner Lesage, Vice-president of the club. An informal tea and get-together was held by the members in the afternoon.

Six very interesting and instructive table clinics were given and the first prize went to Miss Marjorie McInnes, and the second to Miss Norah Johnson. The poster prize was won by Miss Mel Rundle.

EVE MIRON.

NEW BRUNSWICK:

Annual Convention

The 46th Annual Session of the New Brunswick Dental Society was held at the Admiral Beatty Hotel, Saint John, New Brunswick, September 22-23. The program included a clinic by Dr. Frank Martin, of Toronto, on Full Denture Impression Technique and a lecture on Anaesthesia, Sterilization and Children's Dentistry by Dr. Ralph R. Dalgleish, of Sydney, N.S. Four officers of the Canadian Dental Corps also participated: Capt. T. H. Lewis, Capt. E. C. McKee, Capt. A. E. Hobden and Capt. S. K. Cogle.—*St. John Telegraph-Journal*.

PRINCE EDWARD ISLAND:

Increase in Dues

The dentists of Prince Edward Island have decided to raise their annual dues from \$3.00 to \$10.00 and to contribute the \$4.00 membership fee to the Canadian Dental Association, commencing January, 1942.

ALBERTA:

Calgary Dental Assistants

The October meeting of the Calgary Dental Assistants' Association was held on the evening of the 9th at 6:30, at which 22 members were present. Tea was served by Miss Ethel Fisk, Miss Gwen Hilliard, and Mrs. Jean Hood.

Mrs. Hood was presented with a cup and saucer as a wedding gift from the club, and a short business meeting followed. At 7:30 the members adjourned to the Palliser Hotel where Mr. E. E. Rogers, of Vancouver, gave a very interesting illustrated talk on X-ray in the Dental Office. The Ash Temple Company provided very delicious refreshments.

SASKATCHEWAN:

College of Dental Surgeons

The annual meeting of the Council of the College of Dental Surgeons of Saskatchewan was held in Saskatoon, October 11. The annual election of officers for the year resulted in the re-election of Dr. E. Mounter as President; Dr. W. F. Smith, Vice-president and Dr. L. J. D. Fasken, Secretary-treasurer. The Council met with Dr. Thomson, President of the University of Saskatchewan, and discussed questions of mutual interest.

Regina Dental Society

The Regina Dental Society held its first meeting for the fall and winter season on September 9 at the Drake Hotel, with the President, Dr. C. C. Clermont, in the chair. After the dinner the business of the Society was discussed and plans made for the season.

The October meeting of the Society was held in the Drake Hotel on October 14, also with the President in the chair. At this meeting Dr. C. H. Weiker gave an interesting résumé of the proceedings of the Convention of the Western Canada Dental Society held in Edmonton, Alberta, June 2-4. It was generally conceded that the officers of the Society and the local committees were to be congratulated on a very successful meeting.

Moose Jaw Dental Society

The Moose Jaw Dental Society held its first meeting of the season in the Grant Hall Hotel on October 2, with the President, Dr. A. F. Muirhead, in the chair. The election of officers for the season was held and resulted in the selection of Dr. F. C. Harwood as President; Dr. J. E. Rundle, Vice-president and Dr. C. W. Wellington, Secretary-treasurer.

Dr. Chegwin Enlists

When Dr. A. E. Chegwin, Moose Jaw, enlisted recently in the Canadian Dental Corps

it caused some disruption in the civic life of his home city. The City Council, of which he had been a member for many years, granted him leave of absence of the duration of the War. The Moose Jaw General Hospital, while accepting with regret his resignation as Chairman of the Board, also granted him leave of absence for the duration and retained him as a Board member in recognition of his nine or more years of valuable service to the Hospital Board of Governors.

Regina Dental Assistants

As the opening of the fall and winter season, the Regina dental assistants held a supper meeting in the Broder Building on September 15. Later the meeting adjourned to the office of Drs. Johnson and MarFarlane, where the accumulated business of the summer months was disposed of. It was decided to meet each month at the home of one of the members, Mrs. N. Scott offering to act as hostess for the October meeting.

During the evening Miss Evelyn Mohr, a bride-elect of September, was the recipient of a piece of Pyrex ware, the presentation being made by Miss Doris MacDonald on behalf of the Society.

MANITOBA:

Winnipeg Dental Society

The opening meeting of the Winnipeg Dental Society was held in the Medical Arts Building October 14. Dinner was served at 6.30 and later the President, Dr. E. J. Robb, called the meeting to order.

Doctors Wm. Robb and Arthur Jobin, members of the Honorary Staff of the Winnipeg General Hospital, entertainingly described work as related to treatment of fractures and cysts.

Lieut.-Col. W. W. Wright advised the meeting that of 1260 charts of enlisted men—146, or 11½ per cent, would have been rejected, were it not for the service of the C.D.C.

Dr. A. E. Proctor announced the intended removal of Dr. Howard Geddes, a former president of the Society, to the coast, and moved that the Secretary be asked to forward a vote of thanks to Dr. Geddes for his valued contribution to the Society in the years that have gone.

Dental Nurses and Assistants

The regular monthly dinner meeting of the Winnipeg Dental Nurses' and Assistants' Association was held on October 6, in the Green Room of the St. Regis Hotel, with Miss Jean Gordon presiding. Miss Juel Grose gave an interesting report of the Western Canada Dental Nurses' and Assistants' Association Convention, which she attended as a delegate. The Convention was held in Edmonton, June 2-4.

ONTARIO:

Faculty of Dentistry, University of Toronto

Students in dentistry registered for the current academic years are as follows:

1st year	41
2nd year	70
3rd year	47
4th year	54
5th year	40

In addition there are three occasional students. This is an increase of ten in total registration over that of one year ago.

There are twenty young ladies registered in the dental nurses class.

Bon Voyage

Dr. and Mrs. R. G. Agnew and Dr. and Mrs. H. J. Mullett were given a banquet at the Granite Club in Toronto by more than a hundred of their dental friends and their ladies on October 8. A committee from the Board of Governors of the Ontario Dental Association arranged the function under the chairmanship of Dr. Frank Martin. Dr. E. A. Grant, President of the Ontario Dental Association, acted as toastmaster. Greetings were sent by Col. F. M. Lott, Ottawa, and Mayor F. J. Conboy, Toronto. From out of town Dr. and Mrs. Langmaid, and Dr. and Mrs. Phillips, from Oshawa, and Dr. Devitt from Bowmanville were among those wishing to do honour to the guests.

Dean Mason spoke briefly, commending Dr. Agnew and Dr. Mullett for their work in carrying modern dentistry to China. Dr. Endicott, of the Foreign Missions Board of the United Church, brought greetings from his Board. Dr. T. R. Marshall proposed a toast to the honoured guests of the evening, after which Dr. Mullett and Dr. Agnew spoke informally to their friends.

Mrs. Agnew and Mrs. Mullett were presented with flowers by Dr. John Bothwell; Dr. Agnew and Dr. Mullett were presented with brief cases. The banquet concluded with the singing of Auld Lang Syne.

Dental Nurses and Assistants

Eleventh Annual Convention

Royal York Hotel, Toronto—May 18-21, 1942.

BRANTFORD DISTRICT CHAPTER: On Monday evening, September 29, the dental nurses and assistants of the Brantford District Chapter were guests of the Brantford Dental Association at a dinner in the Bodega Hotel. The President of the Toronto Academy of Dentistry, Dr. S. A. MacGregor, was the speaker on this occasion.

Tomye Turner, President of the Ontario Dental Nurses' and Assistants' Association, and Mrs. Marion Edwards came from Toronto to be present at the meeting.

The members held a quilting party on Wednesday, October 8, at which time a quilt was completed. It will be donated to the Red Cross Society.

MARION GREENSIDES, *Secretary*.

ESSEX AND KENT COUNTY CHAPTER: The members of the Essex and Kent County Dental Assistants' Association met on October 6 in room 308 of the Canada Building. The President, Janet Hamel, was in charge of the meeting and welcomed as new members, Mary-Rae Rawlings, of Leamington, and Dorothy Bailey, Patricia Learne, Mary MacLennan and Christina Ford, of Windsor.

The members decided to again sponsor a Valentine Bridge and tentative plans were made for this annual affair. The sum of \$10.00 was voted toward the cost of the Ontario Bulletin.

The business meeting was followed by a round table discussion on "Timely Tips" with Irene McNair as leader.

WINIFRED GRIER, *Secretary*.

KITCHENER DISTRICT CHAPTER: The Kitchener District Chapter held its October meeting at the Maple Club in the form of a dinner. The President, Edith Inkster, presided, with an attendance of fifteen members.

The guest speaker was Captain Wilkinson, Dental Officer of No. 10 Training Centre, Kitchener, who spoke on the activities of the

Dental Corps and with him was Lieutenant Quinn, who spoke briefly on supplies and transportation.

Misses Ruth Janke and Ruth Clark were the hostesses for the evening.

YVONNE JACQUES, *Secretary*.

LONDON DISTRICT CHAPTER: The regular monthly meeting of the London Dental Nurses' and Assistants' Association was held in the office of Dr. H. D. Taylor. Dorothy Innes presided.

It was decided that a donation of \$2.00 be sent to Ferna L. Cook, Editor of the Bulletin.

The resignation of the Secretary, Winnifred Matheson, was accepted and Ruth Walker was elected to fill that office. Miss Matheson was asked to serve as Social Convener and Isabel Burns was appointed Press Reporter.

A very interesting and complete report of the recent annual convention was read by Audrey Saunders, official delegate to the Ontario meeting, after which Dr. Taylor gave an enjoyable travelogue with motion picture illustrations.

RUTH WALKER, *Secretary*.

SARNIA DISTRICT CHAPTER: On October 6, the Sarnia dental nurses and assistants met in the office of Dr. A. E. Hughes with the new President, Vera Dyer, in the chair. Aileen Palmer was installed as Vice-president, Helen Wynne as Secretary-treasurer, and Kathleen Guerns was appointed convener of the War Fund.

Plans were then discussed for the coming year.

HELEN WYNNE, *Secretary*.

SUDBURY DISTRICT CHAPTER: The dental nurses and assistants of the Sudbury District Chapter held their first fall meeting in the Capitol Theatre Building on Monday, October 6. Ten members were in attendance.

The President, Ina Leikas, gave a brief résumé of the executive meeting in Windsor and acquainted the members with plans for the next provincial convention.

BERNICE BOYD, *Secretary*.

Mrs. Marion Edwards, 488 Huron Street, Toronto, has been appointed to serve as Convener of the Provincial War Fund, which was created in October, 1940, to aid the Canadian Dental Corps overseas.

FERNA LEECH COOK, *Publicity Convener*.

Dental Nurses' Alumnae

A bazaar was held at the Faculty of Dentistry, University of Toronto on Saturday, October 25th.

Chairman Dean Mason introduced Dr. H. J. Cody, President of the University of Toronto, who officially opened the bazaar.

Through Major D. J. Ferguson, District Dental Officer of Military District No. 2, Col. Frank M. Lott, Director of Dental Services, sent his best wishes.

Major Ferguson explained that the proceeds would go to buy a mobile dental unit to take dentistry to the Canadian troops overseas.

Conveners of bazaar were—Afternoon tea, Audrey Kribs; home baking, Marjorie Joyner; candy, Gertrude Whitehead; flowers, Anne Budd; gifts, Florence Peart; white elephant, Mildred Brown; post office, Pearl Bartindale; pantry shelf, Jean Lindsay.

Dr. A. I. Willinsky, a member of the Toronto Amateur Movie Club, showed coloured motion pictures accompanied by music.

The tickets for the lucky draw were drawn by Mayor Conboy, Major Ferguson and Lt. Col. E. M. Wansbrough. A mobile unit was on display at the entrance to the building.

About \$850 was realized in this war effort.

HELEN MCKINLEY,
Corresponding Secretary.

Toronto Ladies' Auxiliary

The Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps has arranged a concert to be given by the Toronto Women Teachers' Choir, under direction of Mae Skilling Mason. The choir will be assisted by Joe Pach, violinist. The concert will be held November 24 in Eaton Auditorium with proceeds in aid of the Canadian Dental Corps.

Dental Dinner at Toronto

The Academy of Dentistry began its current year's programme with a banquet on October 22 with an attendance of 275 members. President Dr. Stewart MacGregor and his executive Council were amply repaid for all their efforts and arrangements by the success of the meeting. Col. Henry Breckinridge of New York was guest speaker and he was introduced to the members by Mayor Conboy. The address of the evening was a discussion

of international affairs, part of which was broadcast over the National Network of the Canadian Broadcasting Corporation.

The following are some of the guests honoured with a place at the head table—Dr. E. T. Guest, retiring President, Dr. E. A. Grant, President of the Ontario Dental Association, Mayor Conboy, Dean A. D. A. Mason, Col. F. M. Lott, Lt. Col. Wansbrough, Lt. Col. Ferguson, Dr. Harry Thomson, Dr. Frank Blatchford, chairman of the Board of the Royal College of Dental Surgeons, Dr. Charles Copp, President of the Academy of Medicine and Dr. R. M. Flash, President of the Hamilton Dental Society.

During the evening Mrs. S. S. Crouch, President of the Ladies' Auxiliary, was pre-

sented with flowers by Dr. Lloyd Grose. Dr. E. T. Guest was presented with a Past President's jewel by Dr. Ed. Grant.

Col. Frank Lott was presented with a cheque for \$100 by President MacGregor, to be used in the best interests of the Corps. Col. Lott, in accepting the cheque, expressed appreciation on behalf of the Corps, and continuing, spoke briefly, indicating some of its achievements. He said, "The Corps to-day is 50% greater than at the end of last war; the number of operations performed to date are about 2 million. As to the future of the Corps, its responsibilities are ever growing if every man in active service is to be made dentally fit. "The Corps now needs 100 more dental officers", was his concluding remark.

EMPIRE NEWS

GREAT BRITAIN:

Registration for Fire-Guard Duties

Dental practitioners are not, as such, exempt from the obligation to register for Fire-Guard duties and all those not over 60 years of age, residing in areas where the Fire Prevention (Business Premises) Order is in operation must register on the day appropriate to their age group.—*British Dental Journal*, Sept. 15, 1941.

Dental Education

(Excerpt from Editorial in *British Dental Journal*, Sept. 1, 1941.)

Heavy responsibilities have been laid upon the Deans of the schools and many new civil duties have fallen upon the students also. But the work of training future dental surgeons has survived every interruption, and the standards of proficiency are being maintained. Many of us have feared that in present circumstances it may not be possible to obtain a sufficiency of clinical work for our students or to give them the opportunity to practice the more delicate and advanced procedures. Even in former days it was not always easy to find sufficient patients willing to give the time for, or able to pay a small fraction of the cost of, the more elaborate work. It may be necessary, in fact, at times to bend before the wind and to place greater emphasis on the essential measures for maintaining dental health and less upon procedures of principally aesthetic

value. To many this will be a great hardship, and it should be our resolve that ample opportunity for post-graduate instruction at a later time shall compensate for any necessary limitation of undergraduate study. Indeed the necessity for post-graduate courses after the war will in any case be so great that those who have devoted their efforts to encouraging the growth of this movement in the past may well see their dreams fulfilled. The thoughts of those men who passed into the Services almost immediately after qualification will turn then to orthodontics and porcelain-work and the many operations which they have now small opportunity to perform; and it will be necessary to provide courses of instruction within the reach of all.

The Fortified Loaf

Dr. E. Graham Little, M.P., reports that the fortified loaf which was to have been introduced long ere this and was proposed to the House by the Parliamentary Secretary to the Ministry of Food on July 18 last year, has now been quietly scrapped. He states that the addition of Vitamin B₁ will be further delayed as well as the proposed addition of calcium. He feels that the Ministry should have the courage to abandon altogether this discredited white loaf and to supply exclusively the national wholemeal bread.—*Dental Record*, September, 1941.

AUSTRALIA:

Working to Win the War

The members of the dental profession of the Australian Dental Association, New South Wales Branch, have responded splendidly in effort, service and by financial contribution towards their highly specialized part in the war effort. The Branch now wants to make a further direct contribution, and to this end a Dental War Chest Appeal is about to be

launched, and so that the project will be shared equitably by all dentists, it has been decided to give it the title of the "1% Appeal" for a Dental War Chest.

At the present time all professions are making concerted efforts in directions of particular interest to them, and it is thought fitting that members should embark on some project whereby they all have an opportunity of contributing on an equitable basis to their own war chest.—*Excerpt from editorial, Dental Journal of Australia, September, 1941.*

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Ann S. E. Mackenzie, of Toronto, Ontario, died October 8, at the Toronto General Hospital where she had been a patient for six weeks.

Dr. Mackenzie was a graduate of Dalhousie University. After teaching for several years on the staff of Vancouver High Schools she entered the Faculty of Dentistry, University of Toronto. Following graduation she served for eight years in charge of the dental clinic at the Winnipeg General Hospital. She resigned this position to spend two years in research work in biological chemistry at the University of Toronto. She had engaged in private dental practice for a year in Winnipeg before moving to Toronto. She was a member of the Women's Dental Association and the Presbyterian Church.

Dr. Mackenzie is survived by seven sisters and one brother.

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Duncan Alexander MacDonnell Curry of Morrisburg, age 45, died suddenly on September 22 at his home.

He was born at Iroquois, Ontario, where

he received his early education. He was graduated from the Faculty of Dentistry, University of Toronto in 1923 and began practice in Ottawa. In 1926 he was forced to give up practice for a time because of ill health, but a few years later he made recovery and began practice again in Morrisburg, where he continued until his death.

In the last Great War Dr. Curry went overseas in 1915 with the 21st battalion and was transferred in France to the 2nd battalion with which unit he received his lieutenant's commission. He was wounded, gassed and invalided home in September, 1917. Dr. Curry had a congenial, likeable personality. A member of the Anglican Church, an active Mason, having held the office of District Grand Superintendent, Royal Arch Masons in 1939. He was a member of the Board of Education since 1931 and was an active member of the Lyons Club. He was an ardent lover of sport and the open spaces.

Dr. Curry is survived by his wife, one son and a sister. He was buried with full Masonic rites.

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Idéal Professionnel et Alimentation Conforme à la Constitution de l'Homme

Conférence donnée au Congrès de Québec en juin 1941

par STANISLAS GAUDREAU, D.D.S.

Mes chers Confrères,

C'est probablement dû à mon titre de vice-doyen des Dentistes de Québec, si les organisateurs de ce Congrès ont eu l'amabilité de m'offrir quelques instants pour causer avec vous de choses qui ont intéressé notre profession depuis un demi-siècle.

Si nous considérons le côté artistique ou technique de notre art, nous sommes tous d'accord, je crois, pour reconnaître qu'il s'est développé d'une façon remarquable depuis plusieurs générations; mais pour ce qui est du côté de l'hygiène ou résistance physique de l'être humain, avons-nous apporté toute l'attention que mérite cet aspect important de notre profession? En un mot, avons-nous cherché à prévenir la carie dentaire? Loin de moi la pensée de vouloir apporter une solution à ce grave problème, je vous propose simplement un petit examen de conscience.

Encore étudiant, j'avais lu dans un journal dentaire, "l'Items of Interest", la phrase suivante: soyez toujours vous-même votre plus sévère critique; et nous pourrions ajouter comme corollaire: vous serez ainsi moins critiqué par les autres. Il est des pensées qui nous impressionnent profondément parfois et qui sont comme des phares éclairant la route que nous devons suivre. "Être son plus sévère critique": c'est-à-dire tendre constamment à faire de mieux en mieux son travail quotidien;

chaque jour faire mieux que la veille; après chaque opération, y voir ce qui n'est pas parfait afin de faire mieux le travail suivant et, pour tenir sa conscience en éveil, se demander toujours comment nous aimerions à être traité si nous étions à la place du malade. . . . Pour bien préciser cette pensée, servons-nous d'une phrase de Charles Péguy: "il faut qu'un travail soit parfait lui-même; en lui-même, pour lui-même, dans son essence même." Parlant des anciens ouvriers de France, le même auteur disait: "il y avait un honneur incroyable du travail, le plus beau de tous les honneurs, le plus chrétien, le seul peut-être qui se tienne debout". S'il est un travail où la perfection doit être cherchée messieurs, n'est-ce pas le nôtre?

En épousant l'art dentaire comme profession, nous nous attendions à ce qu'elle nous soit fidèle; elle l'est dans la proportion où nous lui sommes dévoués. Nous lui sacrifions les plus belles heures de la journée et, si nous voulons être consciencieux durant ces heures de travail, elle nous procurera non pas la fortune, il n'y a pas de fortune dans nos professions, mais une vie honorable, exempte des grandes préoccupations qui minent la santé, car la conscience au travail est la meilleure assurance pour les vieux jours.

Il n'y a pas que les grandes inventions qui donnent du prestige à notre art: la précision dans l'accomplissement du travail quotidien fait plus; elle nous porte à perfectionner constamment notre technique, rendant notre travail plus durable, affermissant ainsi la confiance générale dans nos travaux. Un travail mal fait est non seulement un vol envers le client, c'est un crime envers tous les membres d'une profession qui ont à coeur sa bonne renommée.

Il n'y a pas de doute que les dentistes qui veulent rester dans l'exercice actif de leur profession toute leur vie, doivent avoir une haute conception de leur devoir professionnel. Il serait intéressant de connaître ici les différentes voies suivies par la plupart d'entre nous pour atteindre cette cime que nous devons tous chercher.

Si notre art joue un rôle important dans la vie moderne, et qu'il nous commande de nous tenir au courant de tous les moyens inventés pour bien faire notre travail, il est aussi de notre devoir de nous servir de ce baromètre de l'économie qu'est la bouche et que nous avons constamment sous les yeux pour dépister les causes d'un état morbide d'abord général.

En dehors des heures de travail, il y a les heures de récréation. Nous savons tous que pour avoir une bonne santé, il faut savoir rythmer l'apport et les dépenses de ses forces nerveuses.

C'est par l'emploi de ces heures que l'on peut juger des goûts de l'individu, disons de ses fantaisies. Nous ne parlerons pas ici de la lecture qui fait partie de notre pain quotidien. Ces goûts sont variés à l'infini et, pour chacun de nous, ces tendances ont une influence sur nos pensées, nos jugements, nos discours. Si, par exemple, quelqu'un a une préférence pour des voyages en mer, il y aura souvent dans ses démonstrations une voile, un phare, un bateau. . . . Je ne doute pas qu'il y en ait beaucoup parmi vous qui aiment ce genre de récréation; c'est pourquoi, je vous invite à faire une croisière de quelques instants dans le bas de notre grand fleuve. Si je vous invite à faire ce petit voyage, ce n'est pas par simple fantaisie, mais bien dans un but de santé générale.

Notre navire est de type très ancien, mais aussi très nouveau, car il a intéressé l'humanité à tous les âges. Ce modèle est sorti des chantiers de la basilique Saint-Denis à Paris, au 16^e siècle.

Cette photo d'un bas-relief en marbre qu'on peut voir au musée du Louvre, salle de la sculpture du moyen-âge, représente la constitution de l'homme.

En 1803, Lordat en parle dans ses leçons de physiologie mais l'interprétation la plus parfaite est du docteur Paul Carton.



"L'être humain est un esquif qui vogue sur l'océan cosmique. Il est monté par trois personnages qui correspondent à ses trois éléments formateurs: l'esprit au centre, la vie à l'avant, la matière à l'arrière et cette trinité de forces est groupée dans une unité individuelle: le navire.

La force vitale est figurée sous l'aspect d'une femme de santé florissante et exubérante. Elle est échevelée et d'allure un peu folle, tellement la vie la transporte et l'anime. Elle est, en effet, en quelque sorte, le moteur de l'embarcation, réglé par l'esprit et agissant sur la matière, sur le squelette architectural. Sa force motrice lui est fournie par son propre fonds de vitalité et beaucoup aussi par les souffles puissants de vie atmosphérique qu'elle recueille dans sa voile tendue, comme l'être humain les recueille dans ses poumons gonflés. La force vitale fait avancer l'esquif malgré la volonté de l'esprit, de même que dans le corps la vie fait marcher tous les rouages viscéraux sans intervention de la volonté. Mais par elle-même, elle est incapable d'une direction clairvoyante et réfléchie. Elle tourne le dos, en effet à la direction suivie par le navire et ne s'occupe que de son exubérance. Elle est la folle du logis, l'inconscient, la source des impulsions instinctives, des passions aveugles, des élans irréfléchis; elle doit toujours se tourner vers l'esprit et obéir à sa direction pour que le navire suive correctement sa route.

Le personnage central symbolise l'esprit. Il est figuré sous les traits d'un vieillard parce qu'il est immortel, car il est créé par l'Esprit Éternel. Il domine les deux autres et commande directement à la vie située devant lui et indirectement à la matière placée à l'arrière. Il prend point d'appui sur l'univers et se tient droit avec le secours de deux béquilles, qui représentent la science et la religion. Elles soutiennent sa faiblesse et l'aident à trouver sa voie et à s'éduquer dans la vie.

C'est lui qui dirige le navire, car il a en mains les cordages de la voile gonflée de vitalité. Il peut rectifier son inclinaison, régler les impétuosités de la vie et les directions souvent imparfaites de la matière qui gouverne à l'arrière. Il sait le but occulte de l'existence et cherche à le rendre de plus en plus clair aux yeux de la vie, en la pressant de bien s'exercer, car le temps, mesuré par le sablier, lui est limité pour évoluer sous cette forme individuelle. Son regard est tourné vers l'avant, car

c'est lui qui sait, qui enrégistre le passé, qui veille au présent et qui perçoit au loin l'avenir vers lequel il doit guider le navire.

La matière est figurée, à l'arrière, par cette partie périssable de l'individu: le squelette. C'est elle qui gouverne dans l'air, à l'aide de ses ailes et dans l'eau à l'aide de sa faux qui sert de gouvernail. Par l'action de ce dernier, elle influe sur la force vitale et sur l'esprit et si l'esprit n'est pas encore assez maître de lui dans le gouvernement de la voile, elle peut faire dominer sa direction et dériver fâcheusement la barque. Mais si l'esprit est éduqué, il peut corriger le jeu du gouvernail matériel et imposer sa plus sage direction, grâce au maniement convenable de la voile et aussi de ses propres ailes.

De la présence et de l'harmonie des rapports des trois personnages dépend la bonne tenue de la barque, c'est-à-dire du groupement individuel.

Sans la vie et sa voile motrice, l'esprit n'a aucune prise sur la matière. Sans la vie et sans l'esprit, la matière n'a plus de soutien ni de guide, elle est vouée au naufrage et à la disparition.

Quand le calme règne autour du navire, quand l'air et l'eau sont peu agités, l'ensemble peut se reposer, l'esprit peut alors s'absenter et relâcher les cordages de la voile; la vie continue seule à diriger le navire; c'est ce qui se passe dans le sommeil. Mais qu'une agitation extérieure survienne, le pilote est réveillé et revient à son poste de commandement.

Si la voile de la vitalité se tend à l'extrême, elle peut annihiler la saine direction de l'esprit et imprimer à l'ensemble des mouvements désordonnés et malfaisants, comme dans la colère, où l'impulsion des forces vitales inconscientes se substitue à la volonté raisonnable.

Quand une avarie s'est déclarée à la suite d'une fausse manoeuvre d'un des personnages, d'une désobéissance ou d'une ignorance, il faut s'arrêter au port et la réparer. Il s'agit alors d'une maladie qui nécessite repos et soins appropriés.

L'avarie matérielle ou maladie est alors une conséquence et sert de leçon.

Si la force vitale a reçu un choc violent, ou cesse d'être sollicitée par les forces vitales extérieures, la voile s'affaisse alors faute de vent, c'est la panne ou syncope, l'esprit ne trouvant plus à s'exercer sur la matière. Qu'un cordage matériel vienne à se rompre, ou que le gouvernail de la matière se fausse, l'esprit et la vie sont frappés d'impuissance directrice partielle, comme cela se produit dans les mutilations, les paralysies et la folie.

Enfin, quand survient un accident trop grave, c'est-à-dire une rupture matérielle irréparable, une erreur de conduite trop prononcée de l'esprit ou un affaiblissement de la force vitale trop marqué, l'association se disloque, l'esprit s'échappe avec ce qui reste de vitalité, la barque n'est plus qu'un objet flottant inanimé, un cadavre qui va lentement se désagréger, c'est la mort."

Nous venons de voir la solidarité qu'il y a entre les parties constituantes de l'être humain; si une seule vient à faiblir, il y a répercussion sur les autres. Nous avons vu aussi la hiérarchie qui existe entre ces diverses parties et chacune doit être traitée suivant son rang.

Ce qui vient d'être exposé ne l'a pas été dans le simple but de philosopher, mais dans l'intention bien arrêtée d'apporter une preuve pour ainsi dire palpable que nos forces sont en nous, c'est-à-dire que notre bagage congénital (esprit et force vitale) constitue le plus clair de nos énergies d'action, de nos forces de vie et de nos ressources de guérison. Les énergies extérieures (aliments, air, eau, etc) se réduisent donc au rôle d'agents d'excitation de nos forces latentes et aussi de nos moyens de réparation et de fonctionnement de tout le corps. Ainsi les aliments pris en qualité et quantité identiques par des individus sains, de même poids et de même métier, leur procurent des réactions vitales tout à fait différentes. Un même menu affamera l'un de ces sujets et pourra, au contraire, suralimenter son voisin. L'un

maigrira, l'autre engraissera. A la suite de ce repas, les uns pourront rester apathiques, les autres se montrer surexcités. Les forces d'action qui se manifestent dans l'organisme de chacun d'eux ne leur sont donc pas apportées du dehors, mais tout simplement extraites de leur réserve personnelle, par les excitations des aliments sur les organes des sens et les muqueuses digestives. Sans quoi, les effets ressentis seraient les mêmes pour tous. Dr. P. Carton.

C'est au point de vue de la diversité des tempéraments que le dentiste et le médecin doivent se placer pour conseiller leurs malades en ce qui regarde l'hygiène de l'alimentation.

Nous devons considérer comme aliments de première valeur ceux que le Suprême Chimiste a préparés à l'aide de ses instruments: la terre, l'air, le soleil et non dévitalisés par trop de manipulations. Ces aliments contiennent tous les ferments nécessaires à l'assimilation par l'économie de tous les éléments qui la composent.

L'entretien de toute vie sur terre venant du soleil, nous devons puiser cette énergie où le soleil la dépose: c'est-à-dire dans les fruits et les plantes. Il ne faut pas déduire de ceci que l'homme peut se passer de la chair des animaux dans son alimentation: la nourriture carnée pendant tant de générations a créé dans l'organisme humain des besoins que nous ne pouvons pas ignorer. Rappelons-nous que tous les changements qui s'opèrent dans l'économie sont déterminés par l'action des ferments, corps vivants faisant partie intégrante du protoplasme des cellules de l'aliment, comme des cellules de l'être qui s'en nourrit.

Par sa denture et par tout son trajet intestinal, l'homme n'est pas un carnivore, mais bien un frugivore; c'est-à-dire qu'il doit se nourrir de fruits et de plantes.

Nous concevons tous que la plus grande cause de la carie dentaire est une déminéralisation générale amenée par une vie artificielle et une alimentation défectueuse, et que si nous voulons travailler sincèrement à enrayer ce mal, il faut avant tout en faire disparaître les causes.

Sur ce sujet, Carton dit: la déminéralisation est un fait clinique primitif, une viciation active de l'assimilation, elle résulte uniquement de fautes alimentaires et hygiéniques et elle constitue l'une des principales causes prédisposant aux états morbides.

Parlant d'un régime trop acide, le même auteur dit: l'économie opère la correction nécessaire et pourvoit à l'insuffisance métabolique des cellules digestives vis-à-vis des acides, par une mobilisation, un déplacement des bases alcalines et des sels minéraux, extraits du fond constitutionnel de l'organisme. Des emprunts minéraux se font ainsi aux os, aux dents, aux cellules de tous les tissus, non par corrosion passive pure et simple, mais par une dégradation défensive active, opérée par l'organisme pour offrir des matériaux alcalins qui se combinent aux acides prêts à entrer en circulation, de façon à les neutraliser.

Permettez de rapporter ici une expérience personnelle. . . Depuis au-delà de trente ans je fais le service dentaire de l'Hospice St-Charles où il y a de trois à quatre cents fillettes de 6 à 14 ans. Ces enfants sont, ou orphelines ou elles viennent de familles pauvres ou de ménages désunis. Les heures de repos et de veille pour ces enfants ont été très irrégulières avant leur entrée à l'hospice. Elles ont alors de nombreuses caries. . . Beaucoup d'extractions sont nécessaires, quelques obturations, puis des heures régulières de sommeil, nourriture simple et après, plus de caries. Des cavités sont souvent laissées ouvertes pendant de longs mois sans que nous puissions voir de progrès apparents de la carie. Non seulement plus de caries, mais très peu de cas d'infirmerie. La nourriture à l'hospice est simple et saine. Le sucre y est en quantité suffisante, mais jamais sous forme de bonbons pâteux ou de chocolats qui enlèvent l'appétit des enfants avec toutes ses conséquences.

De ce qui vient d'être dit, chacun peut en tirer les conclusions que lui dicte son

expérience; mais c'est un fait constant et toujours le même depuis trente ans: Par le changement de vie, ces enfants n'ont à peu près plus de caries. Sans vouloir ignorer les causes locales qui accélèrent souvent la marche de la carie, il nous semble que l'affaiblissement du terrain par les erreurs alimentaires et le manque de proportion entre l'apport et les dépenses nerveuses soient les facteurs dominants de la carie chez ces enfants.

Le manque de temps nous empêche de parler ici de la pyorrhée alvéolaire, ou forme particulière de scorbut d'après Fauchard.¹ Elle et sa soeur la carie dentaire semblent être les filles de notre vie trépidante et de notre alimentation dévitalisée, déminéralisée et stérilisée. La parodontose, la pyorrhée, le scorbut à évolution lente ou rapide n'auraient-ils pas tous pour cause première une alimentation stérilisée?

Une poussée de scorbut célèbre dans notre histoire et dont furent victimes les marins de Jacques Cartier il y a 406 ans ici à Québec fut guérie par un de ces ignorants de sauvages que les blancs devaient civiliser. Voyant que la mort fauchait rapidement les marins de Cartier, ce sauvage lui conseilla de faire boire à ses hommes une décoction d'écorce d'épinette blanche. Que conseilla le sauvage en définitive? Simplement de donner les ferments, les vitamines, la vie qui manquaient aux aliments stérilisés des marins.

N'oublions pas la Providence que les marins s'étaient mis à invoquer avec ferveur et qui avait inspiré cette démarche à l'homme des bois.

Dans le passé nous ne nous sommes pas assez occupés de la valeur du terrain sur lequel nous construisions. Nos travaux dureraient plus si l'économie nous élaborait des fondations plus solides.

Pour cela, il nous faut un centre de recherches scientifiques où tous les aliments servant à nourrir le peuple de ce pays soient étudiés, leur valeur nutritive bien établie et la proportion de leurs vitamines et de leurs ferments déterminée.

Je crois que nous serons tous d'accord pour conclure, qu'un des grands secrets de la santé et de la force autant matérielle que spirituelle est la recherche du bien et de l'harmonie dans toutes les conditions de vie. C'est-à-dire que l'association vitale avec tout ce qui vit autour de nous, et la conduite de la vie réglée avec exactitude, procurent à celui qui met ces données en pratique une force d'action et une résistance extraordinaires.

Le corps et la vitalité ont besoin de soins qui comprennent le régime et l'hygiène. On doit leur fournir aliments appropriés, bon air, clarté solaire, eau pure, exercices naturels. Prétendre se maintenir en santé en usant d'un seul de ces facteurs, en n'employant que la cure de régime ou la cure d'air ou la cure de soleil ou la cure d'exercice, c'est construire une seule face à l'édifice et se donner un mauvais abri contre les retours morbides.

Avec l'auteur déjà cité, disons que pour compléter le régime, il faut du côté spirituel, la droiture, l'esprit de vérité, les renoncements, les pratiques religieuses et la croyance en Dieu.

Si, par une alimentation mieux comprise et par une meilleure économie de nos énergies, nous réussissons à faire disparaître une partie importante des caries dentaires, il n'en resterait encore plus que les dentistes n'en pourraient soigner, et nous aurions contribué pour une bien large part au bonheur de nos concitoyens.

Comme groupe appartenant à une carrière libérale, nous avons des droits que beaucoup de nos concitoyens n'ont pas, mais pour la même raison, nous avons de sérieux devoirs envers la collectivité, devoirs dont il faut nous acquitter si nous voulons être dignes du mandat qu'on nous a confié.

Nous n'avons pas fait tout notre devoir quand nous avons obturé une cavité, enlevé une dent ou fait une prothèse; il faut éclairer ceux qui viennent nous consulter

¹ Il est une forme particulière de scorbut dont personne n'a encore pris le soin de parler, etc., F. Fauchard.

sur les causes de leurs malaises et, de concert avec le médecin, prescrire les régimes appropriés à leur condition.

Il ne faut pas conclure de là que des études médicales complètes soient nécessaires pour dentiste; mais il lui faut des études diététiques aussi étendues que possible.

Mes chers confrères, ce court exposé avait pour but d'attirer votre attention une fois de plus sur le très grave problème de la dénutrition de notre population; non par la quantité des aliments, mais par le mauvais choix qu'on en fait. Nous serions tous très heureux, j'en suis sûr, si ce petit travail avait contribué quelque peu à éveiller chez les jeunes le désir de parfaire leurs études de diététique et de se liguer pour combattre un ennemi qui nous enlève plus des nôtres que la guerre, j'ai nommé la carie dentaire.

Si les directions du personnage central sont bien suivies, nous sommes sûrs que l'harmonie règnera à bord, que la traversée du grand fleuve se fera allègrement et que le navire pourra arriver au port sans avaries, et suivant l'horaire fixé par le Suprême Pilote.

Quelle conclusion pratique tirer de ce qui vient d'être dit? Soyons très pratiques: prendre tous les légumes que vous connaissez, carottes, raves, asperges . . . ; persil, laitue, navets . . . ; choux, épinards, celeri. Hachez ou râpez le tout finement, mélangez et mangez-en cru une couple de cuillerées à table deux fois par jour. A un des repas, en vous mettant à table, ajoutez, dans votre assiette, une cuillerée à thé de blé rond que vous aurez fait tremper auparavant pendant deux jours et que vous mélangerez avec les autres légumes; le tout mastiqué jusqu'à parfaite liquéfaction. Vous serez surpris de voir comme c'est agréable au goût. Si vous veniez à vous en fatiguer, ajoutez une toute petite quantité de mayonnaise et le tour sera joué. Bien se rappeler que le feu est l'ennemi des vitamines.

Au point de vue économique, cela dépasse tout ce qu'un avare peut rêver. Un ou deux sous par repas et, cependant, quelle prodigalité: absorber deux fois par jour les plus grandes richesses vitales que le Créateur a répandues sur la terre pour le bonheur de l'homme! Le tout fait bon ménage dans l'estomac et procure de saines humeurs et la bonne humeur.

	Matières azotées	Matières hydrocarbonées	Cendres
Filet de boeuf	15.80	0.00	0.97
Pois secs	24.28	59.18	3.13
Haricots secs	20.77	61.54	3.50
Lentilles sèches	23.03	59.49	2.80
Fèves sèches	25.01	59.96	2.96

Quand le petit tableau que vous voyez ici m'est tombé sous les yeux, il y a quelques années alors que j'apprenais à manger, j'ai été surpris de voir de combien la chair de boeuf, au point de vue matières azotées, était dépassée par nos simples pois et nos fèves; c'est pourquoi je le mets sous vos yeux aujourd'hui. Vu la richesse de ces aliments en matières azotées et hydrocarbonées, il va sans dire, que pour les travailleurs sédentaires, il faut en user avec beaucoup de prudence.

Tableau d'après le Dr. Paul Carton.

Les Vitamines dans la Médecine Infantile

par le docteur RINNE

(suite)

Le lait de vache.

Au tout premier rang des alimentations artificielles, il faut citer le lait de vache *frais*. Pour bien comprendre et la dose de lait qu'il faut donner, et la façon dont il faut le traiter, rappelons une fois de plus que le lait de vache contient trois fois plus d'albumine et de sels que le lait de femme, un peu moins d'hydrates de carbone et de graisses.

En Allemagne, on coupait le lait de vache au tiers. Donc un tiers de lait et deux tiers d'eau. Il fallait des quantités considérables et les résultats n'étaient pas des meilleurs. Il ne faut pas d'ailleurs oublier un facteur racique important: les Allemands sont doués d'un robuste appétit. Actuellement, cette dilution est à peu près complètement abandonnée. Nous ne pouvons cependant pas passer sous silence les travaux d'un pédiatre viennois, à ce sujet. Celui-ci avait eu l'attention attirée sur le fait que les selles de l'enfant nourri au sein, sont assez particulières, jaunes d'or, acides; cette acidité est due à la présence de bacilles lactiques presque en culture pure. Les selles consécutives à l'alimentation au lait de vache sont plus blanches, plus sèches, alcalines, riches en bacilles de putréfaction de toutes les sortes. Il a essayé de trouver un régime ramenant précisément les selles à l'état acide. Il y est parvenu en coupant le lait au tiers, en y incorporant des hydrates de carbone, du fer et du cuivre. C'est un travail intéressant au point de vue recherche scientifique, mais qui au point de vue pratique, laisse à désirer, parce que le régime est trop complexe.

Le coupage.

On a adopté universellement le coupage du lait à moitié. Comme l'insuffisance d'hydrates de carbone est encore plus marquée, il faut ajouter 5% de sucre. Quel sucre? Il semble, à première vue, tout indiqué d'employer la lactose ou sucre de lait, c'est-à-dire le même glucide que l'on trouve dans le lait de femme. C'est une erreur, car la lactose agit comme un purgatif; en se désintégrant, elle finit par donner de l'acide lactique qui est un irritant intestinal, d'où diarrhée. C'est en effet, une lactose industrielle, à solubilité et désintégration rapides et massives; à l'état libération massive en très peu de temps d'un grand nombre de molécules d'acide lactique; le pouvoir osmotique de la solution est donc considérable, ce qui ne se passe pas avec la lactose maternelle (peut-être est-elle polymérisée?).

La saccharose ou sucre de betterave est laxatif à hautes doses, à cause du grand pouvoir osmotique de la solution, c'est-à-dire à partir de 8%.

Comme c'est un produit pur, obtenu par raffinage et cristallisation, il est absolument privé de vitamines, celles-ci ayant été détruites par les chauffages répétés. Pour remédier à cet inconvénient, la raffinerie de Tirlémont a créé le Stérosucre, sucre de betterave + vitamine D, en même temps qu'une marque anglaise lançait le glucose D. Tous les hydrates de carbone sont diarrhéiques, parce que, aboutissant tous au glucose, ils donnent des acides de fermentation et de putréfaction qui activent le péristaltisme.

Pour avoir un produit meilleur marché, le mieux est d'employer deux hydrates de carbone: la saccharose, qui donne une saveur sucrée, par sa dissolution rapide et un mélange à parties égales de dextrine et de maltose (maltosucre, nutromalt, vigmaltose).

Le malt contient un peu de vitamine. La dextrine est un produit de désintégra-

tion de l'amidon; c'est de l'amidon qui a subi un commencement de lyse, dont la molécule n'est plus si complexe. L'amidon pourrait, lui aussi, être employé; mais on se heurte à des difficultés d'ordre pratique; lors du chauffage, il a tendance à coller au fond de la marmite et il brûle. À l'université, on emploie pour le cuire, une marmite en nickel à double paroi. La chaleur est produite par circulation de vapeur surchauffée à 110 degrés. Vous voyez d'ici les difficultés et le prix de revient. Cet amidon cuit, donc à grains très fins, est digéré dès les premiers jours de la vie. Pour plus de facilité, on recourt aux maltodextrines.

Régime du premier mois.

Un demi litre de lait de vache frais	=	330 calories
Un demi litre d'eau		
50 gr. de sucre ordinaire	=	200 calories
30 gr. de maltodextrine	=	120 calories

La valeur énergétique est donc de 650 calories
par litre, soit à peu près, celle du lait de femme.

x x x

Il faut attirer l'attention sur le mot: frais, lait de vache frais. On fait actuellement encore beaucoup de réclame autour des laits stérilisés, laits en poudre ou condensés, et on insiste comme de juste, sur le fait de la parfaite stérilité du mélange. Air pur, bétail de choix, instrumentation scientifique, hygiène sévère. Les vitamines sont conservées. D'autres disent même qu'ils en ajoutent.

C'est vraiment bourrer le crâne du public.

Passons ces produits en revue. D'abord le lait stérilisé.

Le commerçant connaît la loi quand celle-ci peut lui procurer un avantage. Comme un lait est réputé non écrémé s'il contient 28 gr. de beurre par litre, vous devinez de suite que tout l'excédent en est soigneusement enlevé. Aussi la teneur du lait en matières grasses qui est normalement de 40 gr. et plus par litre, tombe-t-elle déjà de ce fait, à 28 gr. Presque la moitié. De plus, les hydrates de carbone sont modifiés par le chauffage à 104° minimum; le lait est jaunâtre et non plus blanc. Cette coloration est due au caramel: c'est le nom que l'on donne aux hydrates de carbone ainsi cuits, brûlés presque. Les vitamines A et D résistent à cette température, mais s'il y a d'autres manipulations, elles peuvent être détruites par oxydation. La vitamine C, qui est si utile pour prévenir le scorbut, est détruite sans rémission par le chauffage au-dessus de 100 degrés. De plus, la conservation parfois très longue, peut encore diminuer, voire supprimer, ce qui reste de vitamines A et D.

Les laits en poudre sont presque totalement dégraissés. Le pouvoir énergétique est fortement réduit, puisqu'ils ne contiennent pour ainsi dire plus que de la lactose et des albumines.

Le lait condensé par évaporation à chaud, ou, ce qui est déjà mieux, à froid dans le vide, a été préalablement dégraissé, puis fortement enrichi en saccharose. D'où son pouvoir purgatif. Bref: le pouvoir énergétique, la valeur plastique de ces préparations (certaines albumines étant désagrégées), leur richesse en vitamines, sont fortement modifiées.

Ces laits industriels devraient être réservés pour des cas spéciaux: soit intolérance au lait de vache, soit au cas de difficultés d'approvisionnement (colonies par exemple).

Cet engouement pour les laits conservés date des théories de Pasteur. Le bacille, voilà l'ennemi. C'était l'ère bactériologique de la pédiatrie. On redoutait tellement l'infection, que l'on ne voyait de salut que dans l'ébullition et la stérilisation. Actuellement, on est revenu à une vision plus sereine. C'est la période biologique. Le lait de vache ne peut être souillé que par des bacilles de la tuberculose bovine et des

microbes banaux. La tuberculose bovine n'est guère contagieuse pour l'homme; elle ne peut nuire que si le pis de la vache est lui-même le siège de la lésion tuberculeuse, ce qui donne des décharges massives de bacilles dans le lait. Ces bacilles et les microbes banaux sont détruits par une ébullition de trois minutes. Il vaut mieux ne pas la prolonger davantage, pour conserver à coup sûr les vitamines liposolubles.

Dans l'alimentation artificielle, il faut surtout craindre la suralimentation. On a des enfants très gros, très florissants, dont on est tout fier, mais qui sont une proie très facile pour la moindre infection. On les voit alors fondre à vue d'œil, car ils sont sans résistance. Ils font alors du choléra infantile, diarrhée profuse avec adynamie. Ce choléra est de l'entérite aigüe, dont le mécanisme d'apparition est le suivant: normalement, le lait est désintégré au fur et à mesure qu'il descend dans le tube digestif, et tel produit A est résorbé dès la sortie du duodénum, tel autre B dans le jejunum, un autre C dans l'iléon. Si la nourriture est trop abondante, une certaine quantité d'A va jusque dans le jejunum, ou même plus loin encore. Du produit B va jusque dans l'iléon. Il s'ensuit une perturbation de la résorption due à l'encombrement et à la présence de produits anormaux à tel ou tel étage de l'intestin. Celui-ci se congestionne, secrète davantage et résorbe moins. D'où, élimination plus abondante et plus aqueuse par les selles, diarrhée, sensation de soif due à la déperdition d'eau, fragilité aux infections due à la non résorption des vitamines liposolubles.

Plus l'enfant est jeune, plus l'alimentation artificielle est chose sérieuse, comme on l'a prouvé par l'expérience sur l'animal relatée plus haut.

Dès le second ou troisième jour, donner six fois, 50 gr. L'enfant ne prend pas tout; mais au bout de huit jours, il doit vider ses bouteilles de 50 gr.

Après un mois, il prend 100, 110, 120 gr. de mélange par bouteille. Si la progression est suffisante, continuer ainsi pendant le second mois avec du lait à moitié.

Si au contraire, la progression est insuffisante, ou l'appétit peu développé, on peut diminuer la quantité d'eau, les autres produits restant à la même quantité. Par exemple:

- un demi-litre de lait de vache,
- un quart de litre d'eau,
- 50 gr. de sucre ordinaire,
- 30 gr. de dextrine maltosée.

S'il y a des vomissements faciles par spasme du pylore, on peut même supprimer l'eau totalement:

- un demi-litre de lait de vache,
- 50 gr. de sucre ordinaire,
- 30 gr. maltosucré.

Autrefois, on expliquait les vomissements par la position couchée; il suffisait, croyait-on, de tenir l'enfant debout après la tétée, pour qu'il fit son renvoi sans incident. Au contraire, chez des nourrissons difficiles à élever, semblable manipulation augmente encore le malaise. La tendance aux vomissements est encore plus impérieuse. Il faut au contraire donner la bouteille à l'enfant couché, de façon à le remuer le moins possible quand son estomac est rempli. On se trouve bien également, en semblable occurrence, d'administrer dans chaque bouteille, 25 ctg. de citrate de soude, ou de bicarbonate (par ex., un comprimé de Citrosodine Longuet).

Le régime ne contient pas assez de graisses; par conséquent, il y manque des vitamines liposolubles.

A TROIS MOIS:

Il faut donner un peu de graisse, sous forme de soupe de beurre, ou à la rigueur, par adjonction d'une petite quantité de beurre frais dans les biberons (frais ou fondu dans la poêle).

Si c'est l'hiver, le besoin de graisses et de vitamines se fait sentir encore plus tôt. Aussi doit-on recourir aux vitamines liposolubles A et D dès le premier mois.

A QUATRE MOIS:

Au quatrième mois, il est absolument impossible d'arriver à un bon résultat sans cette adjonction de graisse. Aussi peut-on remplacer un biberon par une soupe de beurre. Voici le mode de préparation; 7 gr. de beurre sont fondus dans la poêle. Quand le beurre est bien roussi, on ajoute 7 gr. de farine et on fait un mélange homogène. On ajoute ensuite 100 gr. de lait, 100 gr. d'eau, 5 gr. de sucre. Donner ce régime surtout à l'enfant un peu pâle, flasque, à gros ventre mou (premier stade de rachitisme).

Pour le 4^{me} et 5^{me} mois, voici le menu de la journée entière:

2/3 litre de lait de vache,

1/3 litre d'eau,

50 gr. de sucre ordinaire,

30 gr. maltosucré ou de farine blanche de froment.

Ce régime donne 760 calories par litre.

La farine Milo est une farine dextrinée qui convient très bien dans le cas.

A SIX MOIS:

Dès ce moment, il faut instituer un régime varié. La réserve de fer hépatique est épuisée; l'enfant se remue beaucoup plus; il a des besoins plus grands en calories, mais aussi en matériaux plastiques. Comment les fournir? En augmentant la ration de lait ou en enrichissant le lait par des produits variés: beurre, hydrates de carbone. Chacune de ces deux méthodes a ses partisans; autrefois, c'était des plus facile: on augmentait la quantité totale de liquide et tout était dit, quitte dans la suite à concentrer un peu la soupe. A l'heure actuelle, les Français sont encore partisans des grandes quantités. Les Allemands, les Anglais et les Suisses, à la suite du pédiatre Fähr, de Zürich, ont une méthode toute différente. Fähr pose en principe, que l'on ne doit jamais donner plus d'un demi-litre de lait par jour, quel que soit l'âge. Il faut compléter la ration alimentaire au point de vue énergétique et plastique, en enrichissant la solution. Les magnifiques résultats obtenus en France même, par des nurses suisses et anglaises ont commencé à ouvrir les yeux aux médecins. Voici quelques règles générales d'application courante.

Le beurre, dans les premiers temps, doit de préférence se donner cuit, non pour des raisons de digestibilité, mais pour éliminer autant que possible, la contamination éventuelle par des bacilles qui pourraient souiller le beurre.

Les maltodextrines, telles que maltosucré, nutromalt, sont versées d'emblée dans de l'eau bouillante pour pouvoir obtenir une bonne dissolution. Le vigmaltose et les farines blanches doivent être délayées dans de l'eau froide, puis on ajoute le lait, le sucre et on porte à l'ébullition. Celle-ci ne doit durer que trois minutes pour ne pas détruire complètement les vitamines respectées par les manipulations industrielles de la farine. On verse le liquide bouillant dans les biberons et on bouche d'un flocon d'ouate hydrophile. Le frigidaire n'est pas indispensable. L'aseptie est ainsi suffisamment respectée. Mieux vaut ingurgiter quelques bacilles inoffensifs, que de risquer une avitaminose. Ce ne sont pas les bacilles qui rendent l'enfant malade, mais la mauvaise proportion des soupes et de l'alimentation en général.

A 6 mois, on commence à donner de la purée de légumes verts, et de la pomme de terre par cuiller à café. Au repas de midi, 2 à 4 cuillers à café de purée d'oseille ou d'épinard, un peu de poireau, salade, ou laitue. Si on n'a pas la patience de donner à la cuiller, ou que l'enfant ne le veuille pas, on incorpore cette petite quantité de

légumes verts dans un biberon contenant du lait et $1/4$ ou $1/3$ d'eau. On ajoute 2 gr. de beurre pour une soupe légère bien passée.

A SEPT MOIS:

On commence à donner du pain. Une petite tartine beurrée de 5 à 6 cm. de côté sur $1/2$ cm. d'épaisseur, sans croûte, contient beaucoup d'hydrates de carbone, 2% de protéine végétale, les lipoides et les vitamines du beurre ainsi que les sels minéraux du froment. On y ajoute un peu de confiture. L'enfant apprend ainsi à mâcher, même s'il n'a pas encore de dents.

On remplace le biberon de 10 heures par une petite tartine beurrée avec confiture et 100 gr. de lait non sucré à la tasse.

A HUIT MOIS:

Au lever, sein ou biberon: 150 gr. de lait,
50 gr. d'eau,
2 morceaux de sucre,
1 cuiller à café de farine.

A 10 heures, une tartine beurrée + 100 gr. de lait de vache sans sucre.

A 1 heure, légumes, soup ou purée.

A 4 heures, une tartine beurrée + 100 gr. de lait non sucré.

A 7 ou 8 heures du soir, un biberon comme le matin.

La ration journalière est de 500 gr. de lait maximum. On voit que l'enfant progresse. A ce propos, on peut juger que l'embonpoint est suffisant quand le plicule adipeux de ventre est d'au moins un cm., ce que l'on constate en pinçant la peau du ventre entre deux doigts. L'alimentation couvre des besoins de différentes catégories: dépenses de croissance, énergétiques et dépenses pour la lutte contre le froid. A cet âge, les dépenses de croissance sont beaucoup diminuées, car la courbe de croissance n'est plus guère aussi verticale, elle s'incline de plus en plus vers l'horizontale. Les dépenses énergétiques, elles, sont beaucoup accrues, car l'enfant se remue dans de notables proportions.

La lutte contre le froid consomme moins de calories au fur et à mesure que l'enfant grandit. Plus l'enfant est petit, plus la surface est grande par rapport au poids. La surface de rayonnement ne grandit pas proportionnellement au poids. La perte par rayonnement est de ce fait moins considérable.

Certains enfants moins voraces ne mangent qu'à 7 heures du matin. Dans ce cas, on peut supprimer le repas de 10 heures ou le remplacer par un jus de citron ou d'orange, celui-ci étant accepté plus volontiers. Ce régime varié combat l'anémie ferriprive, qui tend à se développer chez tous les gosses de cet âge, à la suite de l'épuisement de la réserve de fer hépatique.

En cas d'anémie, il faut donner une préparation contenant du fer et un peu de cuivre, par exemple la formule suivante;

Rp. Protoxalate de fer 10 ctgr.
Sulfate de cuivre 2 milligr. Pour un paquet.

S. Un paquet par jour.

Après la purée de légumes, on donne un fruit: pomme, poire, cerise, selon la saison. De préférence, un fruit mûri sur l'arbre. La pelure du fruit est très riche en vitamines, mais elle est difficile à absorber et plus encore à digérer; on la retrouve intégralement dans les selles.

(à suivre)

In Memoriam

Au milieu du mois dernier est décédé un confrère estimé de tous, le docteur Robert Mackay, après une bien longue maladie.

Nous prions sa famille d'accepter nos sincères condoléances.



Giants' Staircase above. A roaring foam-spouting waterfall, thunders with mountain music, in Banff National Park. INSET: On the modern highway from Lake Louise to Jasper National Park.

By courtesy of the Metropolitan Printing Company, Edmonton, Alberta.



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President, Halifax Dental Society.

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Twice President, Nova Scotia Dental Association, 1906 and 1916.

Vice-President, Halifax Community Concert Association.

For many years Soloist at St. Paul's Church.

Appointed Dental Surgeon to Army Medical Corps, 1907, and retired with rank of Captain, 1920.

Graduated, University of Pennsylvania, 1901, and for past forty years has practised in same office.

A Photomicrographic Study of Tooth Development

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IN THIS paper an attempt has been made to describe the tissues of the tooth germ in the order of their appearance and of their apparent importance in the developmental process. The term, tooth germ, includes both the epithelial and the connective tissue structures which are concerned in the prenatal development of the deciduous tooth. The description centres around an interpretation of events as revealed by photomicrographs of human specimens.

The study is confined to a description of tooth germs ranging in age from two months to six months. Embryos younger than two months and foetuses older than six months are difficult to obtain. If and when earlier embryos and later foetuses are obtained a complete description of tooth development may be attempted.

All measurements of embryos and foetuses are those of the crown-rump in millimetres. Arey's method of estimating the age of the embryo from the crown-rump measurement is used throughout.

References in this paper are confined to the works of Orban, Mummery, and Wellings. The chief source is Orban's unique book, "Dental Histology and Embryology," Second Edition, 1929.

The only claim to originality for this work is its method of description. This method might bring forth severe criticism, yet, I am convinced that it is of

value in simplifying the study of dental embryology for the general practitioner, who often has neither the time nor the inclination to study the development of the tooth.

It should be remembered that the tooth germ is composed of both epithelial and connective tissue structures. The epithelial structures are the dental lamina and the enamel organ. The function of the latter structure is the production of enamel. The connective tissue structures consist of the dental papilla and the dental pulp. The dental pulp produces dentine. The development process consists of a simultaneous growth of both epithelial and connective tissue structures. However, as growth of the epithelial structures in the early stages is more prominent than growth of the connective tissue structures, the appearance of the dental lamina indicates the beginning of the tooth germ. The growth of the connective tissue structures is indicated only by the presence of a small concentration of cells at the deep surface of the enamel organ. This group of cells is the beginning of the dental papilla.

The tooth germ grows in all dimensions, namely, length, breadth and thickness, and there is a coincident growth of the tissues surrounding the tooth germ. For example, in the case of a lower tooth germ, while it grows in all dimensions its position in relation to Meckel's

cartilage shows little change, or, in the case of an upper tooth germ, while it grows in all dimensions its position in relation to the floor of the nose changes but little.

For the sake of clarity the material has been divided into six sections.

SECTION I. A consideration of the Dental Lamina as the elementary epithelial tissue of the tooth germ. The subject is described under the headings: Origin, Significance, and Disappearance.

SECTION II. A description of those tissues which are considered to be of secondary importance in the developmental process and to which is given the name Accessory Epithelial Tissues of the tooth germ. These include: The Lateral Enamel Strand; The Enamel Niche; The Enamel Knot; The Enamel Cord; and the Enamel Navel. They are all described under the headings: Origin, Significance, and Disappearance.

SECTION III. A description of the Dental Papilla, a connective tissue structure of the tooth germ.

SECTION IV. A. The Independent Enamel Organ.

B. Enamel.

SECTION V. A. The Dental Pulp.

B. The Dentine.

SECTION VI. Summary of the foregoing sections.

SECTION I.

THE DENTAL LAMINA

ELEMENTARY EPITHELIAL TISSUE OF THE TOOTH GERM

Origin:

The dental lamina is an epithelial tissue arising from the oral epithelium. (Fig. 1.)

Significance:

1. The dental lamina is considered to be the elementary epithelial tissue of the tooth germ because it forms the first recognizable structure of the tooth germ, and because it is the original dental tissue from which other epithelial tissues of the tooth germ are derived.

2. The dental lamina marks the begin-

ning of the tooth germ. (Fig. 1.)

3. The dental lamina forms the primary tissue of attachment between the oral epithelium and the tooth germ. (Figs. 1. 3.)

At its superficial surface the dental lamina is a continuation of the oral epithelium. At its deep surface it is attached to the enamel organ. Therefore, the dental lamina is the primary tissue of attachment between the oral epithelium and the enamel organ of the tooth germ.

4. The dental lamina forms the connecting link between the individual tooth germs, that is, it passes from one tooth germ to another. (Fig. 2.)

The tooth germs are the precursors of the deciduous teeth. Since the deciduous teeth erupt at different times, it is natural to find their respective tooth germs in varying degrees of development. For example, the deciduous lower central incisor erupts months earlier than the deciduous first molar and as a result the tooth germ of the lower central incisor will be more highly developed, at any given time, than that of the lower first molar. By the time that all ten tooth germs of the ten deciduous teeth appear in each jaw, the dental lamina is seen to be a common connecting link between the individual tooth germs and extending from the molar region of one side of the jaw to the molar region of the opposite side.

5. The dental lamina forms the lingual boundary of the enamel niche. (Fig. 3.)

6. The lingual surface of the dental lamina gives origin to the epithelial bud of the permanent tooth. (Figs. 3. 4. 5.)

Disappearance:

The dental lamina disappears by a gradual breaking-down process. (Figs. 6. 7.) It apparently remains attached to the enamel organ of the tooth germ and to the bud of the permanent tooth until such time in the developmental process of these structures that they are capable of an independent existence. The severance of the dental lamina from the enamel

A Photomicrographic Study of Tooth Development

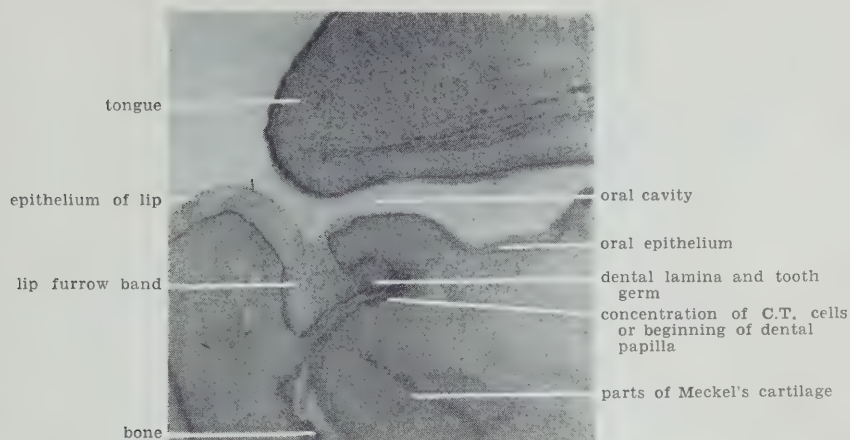


FIG. 1.—Tooth germ of a lower central incisor of a 30.0 mm. human embryo (approximately 2 months), sectioned labio-lingually. X60.

organ and from the bud of the permanent tooth seems to be gradual, together with its slowly progressive disintegration. The dental lamina in the advanced stage of disintegration is shown in Fig. 9.

Description of Fig. 1.—The oral cavity intervenes between the tongue and the lower jaw. The oral epithelium gives origin to the dental lamina, to the lip furrow band, and to the epithelium of the lip. The black line separating the epithelial from the connective tissues appears to be, under high magnification, the deep layer of cells of the epithelium. It is sometimes called the basal membrane, but whether an actual membrane exists is controversial. The lip furrow band is labial to the dental lamina, therefore an-

other name for it is the labio-dental lamina. The dental lamina forms a right angle to the lip furrow band. The beginning of the tooth germ is indicated by the appearance of the dental lamina. The replacement of bone for Meckel's cartilage is already taking place. In this figure the newly formed bone has been torn from Meckel's cartilage.

Description of Fig. 2.—The dental lamina is a continuous layer or band of epithelial tissue attached to each tooth germ. In this figure, one tooth germ is more highly developed than the other.

Figs. 3, 4, and 5 are sections cut from the same specimen but they do represent a series to illustrate the temporary nature of the lateral enamel strand and the

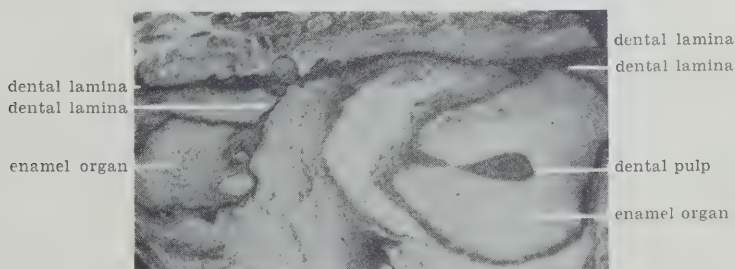


FIG. 2.—Dental lamina connecting two tooth germs of the lower jaw of an 80.0 mm. human embryo (approximately 3¼ months), sectioned transversely. X20.

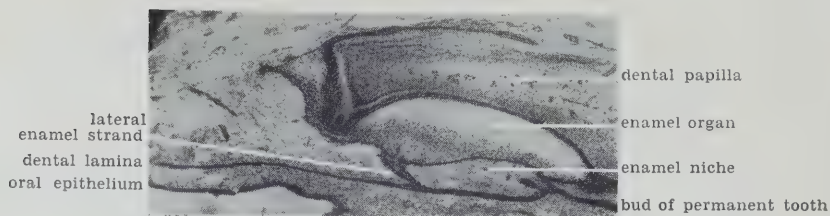


FIG. 3.—Tooth germ of an upper molar of an 80.0 mm. human embryo, sectioned bucco-lingually. X20.

enamel niche in contrast to the more permanent nature of the dental lamina.

Description of Fig. 3.—The dental lamina forms the lingual boundary of the enamel niche. The epithelium from the lingual surface of the dental lamina gives origin to the epithelial bud of the permanent tooth.

Description of Fig. 4.—There is a marked decrease in the size of the tissues of attachment. These are the tissues by

means of which the tooth germ maintains contact with the oral epithelium. The tissues of attachment are the dental lamina and the lateral enamel strand. The dental lamina is considered to be the primary tissue of attachment since it unites directly with the oral epithelium. The lateral enamel strand is considered to be the secondary tissue of attachment since it arises from the dental lamina and thus is connected indirectly with the oral

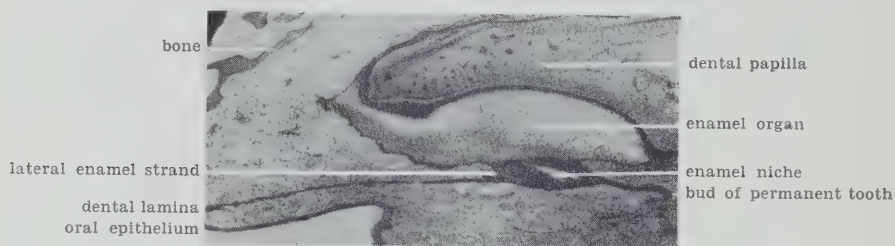


FIG. 4.—Tooth germ of an upper first molar of an 80.0 mm. human embryo, sectioned bucco-lingually. X20.

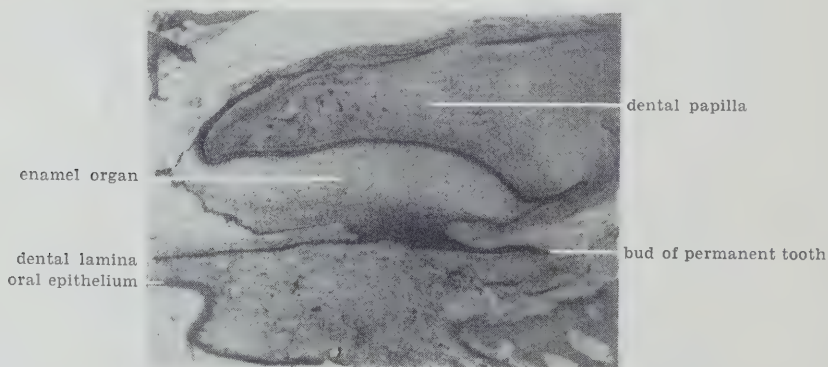


FIG. 5.—Tooth germ of an upper first molar of an 80.0 mm. human embryo, sectioned labio-lingually. X60.

A Photomicrographic Study of Tooth Development

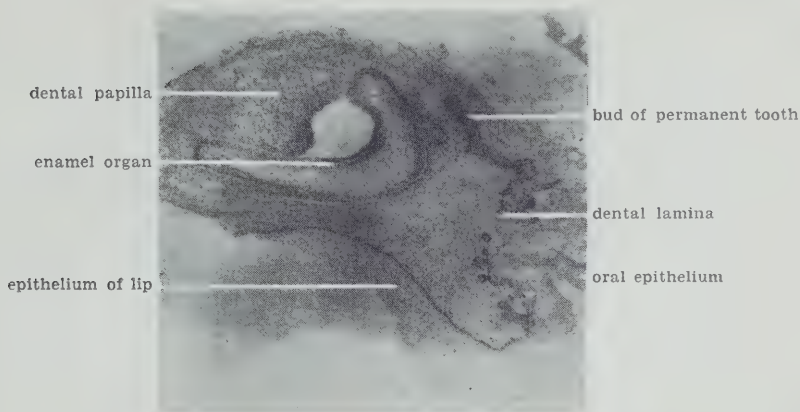


FIG. 6.—Tooth germ of an upper incisor of a 105.0 mm. human embryo (approximately 3½ months), sectioned labio-lingually. X60.

epithelium. It will be seen that the enamel niche becomes smaller as the tissues of attachment are reduced in size.

Description of Fig. 5.—The enamel niche and the lateral enamel strand have disappeared. The dental lamina remains the primary tissue of attachment.

Description of Fig. 6.—The tooth germ is now independent of the tissues of attachment. The tooth germ apparently remains attached to the dental lamina until it reaches a particular stage of development, after which it is able to carry on a separate existence. The dental lamina is already in the process of dis-

integration by the time the tooth germ becomes an independent structure.

Description of Fig. 7.—The dental lamina is in the process of disintegration. During the breaking-up process structures called epithelial coils are found.

Description of Fig. 8.—The epithelial coil is, as the name implies, a coil of epithelial tissue. Only a few epithelial coils are found in the early stages of disintegration of the dental lamina; they are numerous in the later stages. Mummery¹ believes that the function of epithelial coils is to open a pathway for the eruption of the tooth. Orban² claims

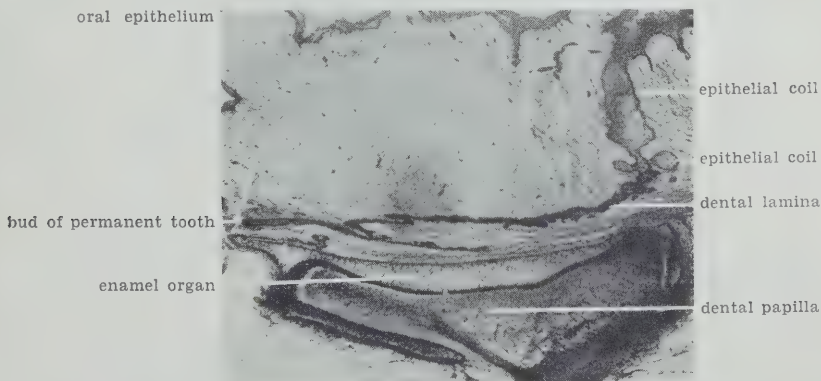


FIG. 7.—Tooth germ of a lower molar of a 110.0 mm. human embryo (approximately 3¾ months), sectioned bucco-lingually. X20.

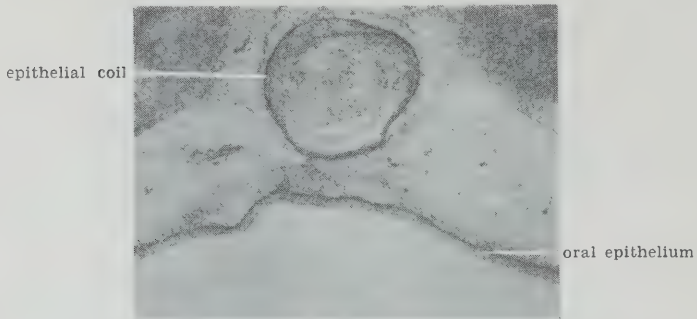


FIG. 8.—Epithelial coil in dental lamina of upper jaw of an 80.0 mm. human embryo, sectioned labio-lingually. X440.

that they persist long after tooth eruption and that their function is not known.

Description of Fig. 9.—This figure shows the advanced stage of disintegration of the dental lamina.

SECTION II.

THE ACCESSORY EPITHELIAL TISSUES OF THE TOOTH GERM

The accessory epithelial tissues of the tooth germ here are considered to be:

1. The Lateral Enamel Strand.
2. The Enamel Niche.

3. The Enamel Knot.

4. The Enamel Cord.

5. The Enamel Navel.

These structures are termed accessory tissues for the following reasons:

1. They appear to be temporary structures in the developmental process, that is, their period of existence is relatively short in comparison to that of the dental lamina.

2. Their significance is obscure and probably of a minor nature in comparison to that of the dental lamina.

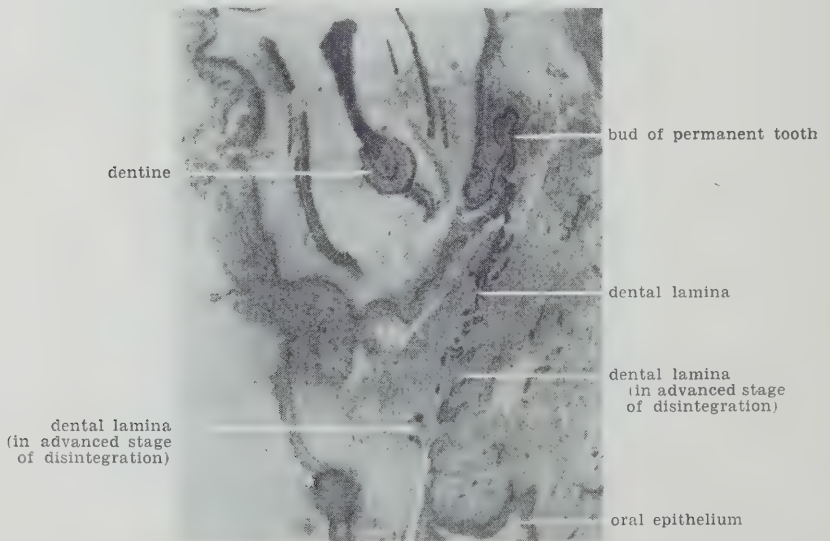


FIG. 9.—Tooth germ of an upper central incisor of a 115 mm. human embryo (approximately 4 months), sectioned labio-lingually. X60.

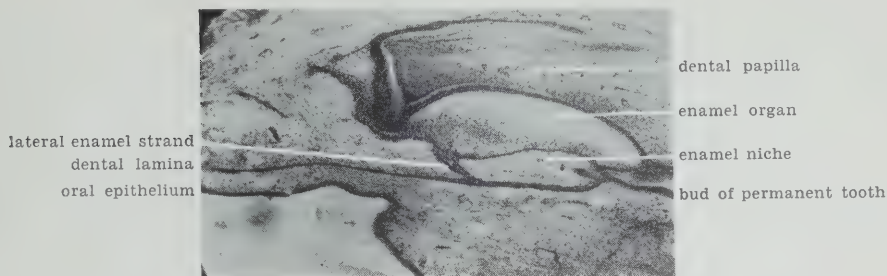


FIG. 10.—Tooth germ of an upper molar of an 80.0 mm. human embryo, sectioned buccolingually. X20.

1. THE LATERAL ENAMEL STRAND.

Origin:

The lateral enamel strand is a strand of epithelial tissue which arises from the labial side of the dental lamina and extends labially to the enamel organ. (Fig. 10.)

Significance:

1. The lateral enamel strand forms the labial boundary of the enamel niche.

2. Here it is also regarded as a secondary tissue of attachment between the oral epithelium and the enamel organ. (Fig. 10.) The primary tissue of attachment is the dental lamina, which is already in existence when the lateral enamel strand appears and which persists long after the lateral enamel strand disappears. Bolk³ explained the significance of the lateral enamel strand in his "Dimer Theory." This theory is founded on the premise that every tooth germ of a primate is a dimeric organ. This means that it is composed of two parts, each one of which has been a complete tooth in the lower orders of evolution.

Disappearance:

The lateral enamel strand as a definite structure disappears at an early stage in the development of the tooth germ.

Description of Fig. 10.—The lateral enamel strand arises from the labial side of the dental lamina and passes to the enamel organ of the tooth germ; it forms the labial boundary of the enamel niche.

2. THE ENAMEL NICHE.

Origin:

The formation of the enamel niche is somewhat obscure but its boundaries become complete when the lateral enamel strand unites with the enamel organ. (Fig. 11.) Orban⁴ claims that there are two enamel niches, namely, a medial enamel niche and a distal enamel niche. He further claims that the development of the enamel niches gives rise to the lateral enamel strand.

Significance:

The significance of the enamel niche is unknown.

Disappearance:

The enamel niche as a definite structure disappears at an early stage in the development of the tooth germ.

Description of Fig. 11.—The enamel niche appears as a detached portion of connective tissue, which in the upper jaw has the form of an irregular inverted triangle.

The boundaries of the enamel niche are:

Base: The superficial surface of the tooth germ.

Labial Boundary: The lateral enamel strand.

Lingual Boundary: The dental lamina.

Apex: The junction of the lateral enamel strand and the dental lamina.

For the sake of clarity the following terms are used to describe the surfaces of the tooth germ:

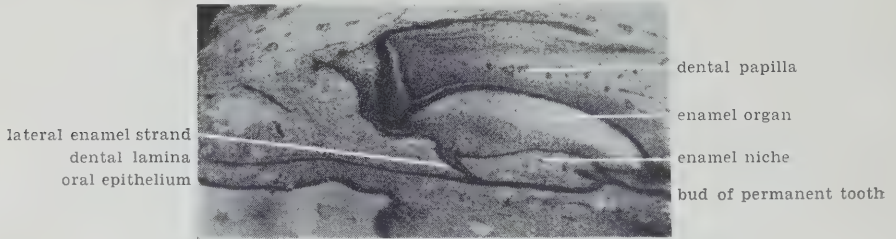


FIG. 11.—Tooth germ of an upper molar of an 80.0 mm. human embryo, sectioned buccolingually. X20.

1. Superficial Surface: That surface of the tooth germ which is directed towards the mouth.

2. Deep Surface: That surface of the tooth germ which is directed away from the mouth.

In viewing the photomicrographs it must be remembered that the picture is seen in one perspective only. For this reason it is difficult to visualize a particular structure, such as the elevated labial margin of the tooth germ, unless we have models of the specimen as an aid to study. Since models are not presented here, explanations are based only on the findings in the photomicrographs.

3. THE ENAMEL KNOT.

Origin:

The enamel knot is a group of closely packed cells appearing in the substance of the enamel organ at its deep surface. (Fig. 12.)

Significance:

The significance of the enamel knot is unknown. However, it might be that the growth of the dental papilla is so rapid that the papilla exerts pressure upon the epithelial cells in the substance of the enamel organ at its deep surface. The crowding together of these cells as a result of this pressure forms the enamel knot. It might be suggested further that the cells of the enamel knot are the

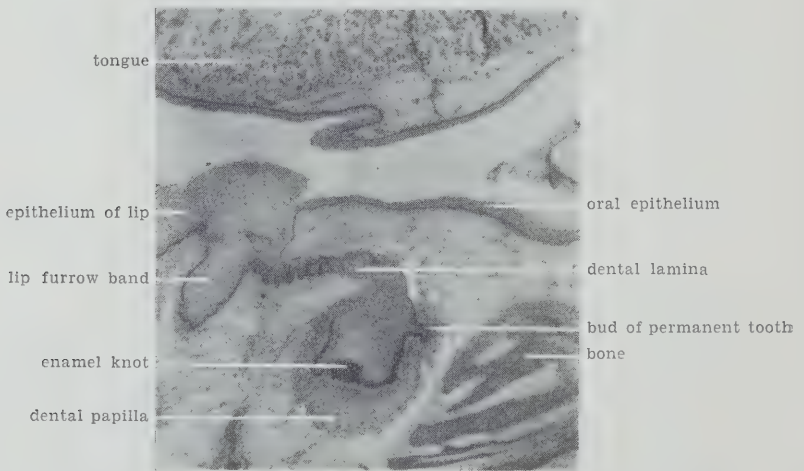


FIG. 12.—Tooth germ of a lower central incisor of an 80.0 mm. human embryo, sectioned labiolingually. X20.

precursors of the ameloblast cells which compose the internal enamel epithelium.

Disappearance:

The enamel knot as a definite structure disappears at an early stage in the development of the tooth germ.

Description of Fig. 12.—The deep cells of the enamel organ are grouped together to form the enamel knot.

4. THE ENAMEL CORD.

Origin:

The enamel cord is a central strand of epithelial cells arising from the enamel knot and extending across or through the enamel organ to its superficial surface.

Significance:

The significance of the enamel cord is unknown but similar to the enamel knot, the enamel cord might be the result of pressure from the developing dental papilla, which forces some of the central cells of the enamel organ into a smaller area. The grouping of these cells into a central strand gives rise to the enamel cord.

Disappearance:

The enamel cord as a definite structure disappears at an early stage in the development of the tooth germ.

Description of Fig. 13.—The enamel cord in the above figure is not yet fully developed for it has not reached the external enamel epithelium of the super-

ficial surface of the enamel organ. Further development can be seen in Fig. 14. Bolk³ claims the existence of the enamel cord as proof of his Dimer Theory.

5. THE ENAMEL NAVEL.

Origin:

The enamel cord appears to exert a centripetal force on the external enamel epithelium at a point midway along the margin of the superficial surface of the enamel organ. The result is that the external enamel epithelium, at this particular site, forms an indentation, which is called the enamel navel. (Fig. 14.)

Significance:

The significance of the enamel navel is unknown, although its presence might be due to the indirect influence of the dental papilla exerted through the enamel knot and the enamel cord.

Disappearance:

The enamel navel as a definite structure disappears at an early stage in the development of the tooth germ.

Description of Fig. 14.—The dental lamina is breaking down, as shown by the presence of epithelial coils. The enamel cord appears to divide the enamel organ into two parts. The enamel navel is seen as an indentation of the external enamel epithelium on the superficial surface of the enamel organ.

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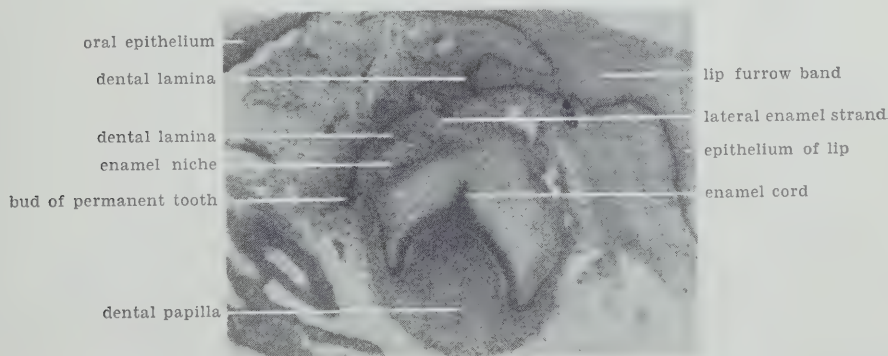


FIG. 13.—Tooth germ of a lower central incisor of an 80.0 mm. human embryo, sectioned labio-lingually. X100.

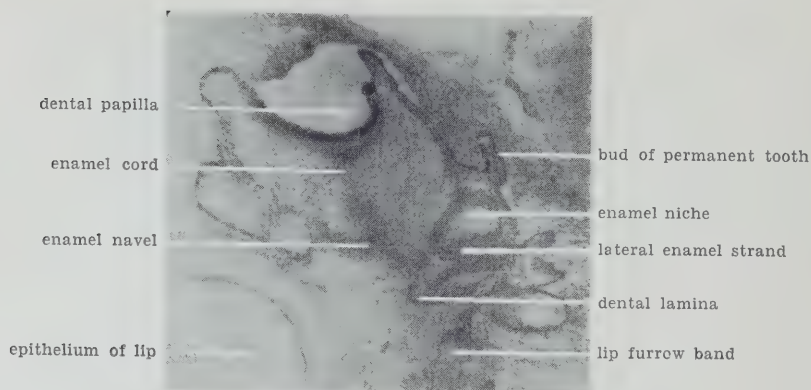


FIG. 14.—Tooth germ of an upper molar of a 105.0 mm. human embryo, sectioned bucco-lingually. X100.

the dental papilla has been pulled out of position.

SECTION III. THE DENTAL PAPILLA

Origin:

The first evidence of the dental papilla is a concentration of connective tissue cells around the deep surface of the enamel organ. (Figs. 1. 15.)

Significance:

The dental papilla later becomes the dental pulp.

Disappearance:

The dental papilla does not disappear but manifests a change of form throughout each particular stage of the developing tooth germ.

Description of Fig. 15.—The dental papilla appears as a grouping of connective cells around the deep surface of the enamel organ.

SECTION IV.

A. THE INDEPENDENT ENAMEL ORGAN

According to microscopic evidence the enamel organ becomes an independent structure upon its separation from the primary and secondary tissues of attachment. At this stage, the enamel organ undertakes the specialized function of producing enamel. Also during this stage, the dental papilla becomes the

dental pulp, which undertakes the specialized function of producing dentine. The dental pulp and dentine will be described in SECTION V.

The enamel organ, by the time it becomes independent, is seen to be composed of four separate layers, namely:

1. External enamel epithelium. This is the external layer and is composed of cube-shaped cells. (Fig. 18.)

2. Stellate reticulum (starlike network). This relatively thick layer lies internal to the external enamel epithelium and consists of epithelial cells with branching processes. The processes from adjacent cells anastomose, the whole picture resembling a network. An intercellular substance fills the spaces of the network. (Figs. 16. 17.)

3. Stratum intermedium. This is a layer of cube-shaped cells, situated between the stellate reticulum and the internal enamel epithelium. (Figs. 16. 17.)

4. Internal enamel epithelium. This is the innermost layer of the enamel organ. It is composed of enamel-forming cells, the ameloblasts, which have a rectangular outline. (Figs. 16. 17.)

Origin:

The independence of the enamel organ

A Photomicrographic Study of Tooth Development

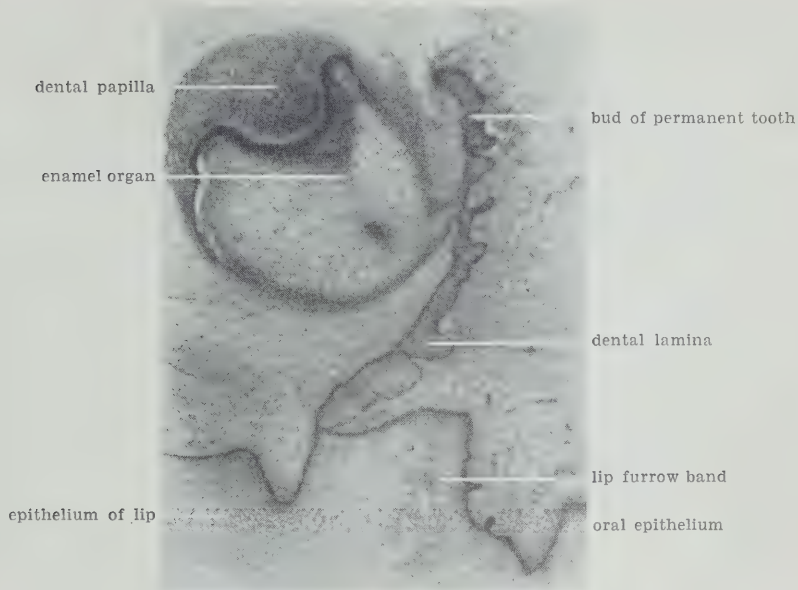


FIG. 15.—Tooth germ of an upper incisor of an 80.0 mm. human embryo, sectioned labio-lingually. X100.

is established by its separation from the tissues of attachment.

Significance:

The independent enamel organ produces enamel.

Disappearance:

In this paper, development is carried

along only to the sixth month, and in this interval the enamel organ does not disappear. However, it will be seen later that the enamel organ is greatly reduced in size as its function reaches completion.

Description of Fig. 16.—The enamel organ is independent of the tissues of

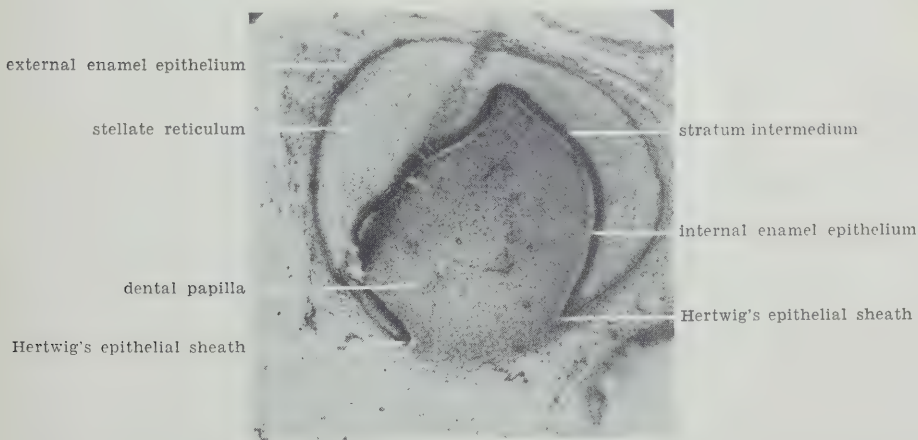


FIG. 16.—Tooth germ of a lower molar of a 125 mm. human foetus (approximately 4 1/7 months), sectioned bucco-lingually. X100.

attachment. The four layers are evident but are seen more distinctly in Fig. 17. Hertwig's epithelial sheath lies at the point where the external enamel epithelium unites with the internal enamel epithelium.

Description of Fig. 17.—The external enamel epithelium in this figure appears fibrous but it is seen in Fig. 18 to be composed of cube-shaped cells. The stellate reticulum appears as a network of branching star-shaped cells, with an intercellular substance in the spaces of the network. The stratum intermedium appears as cube-shaped cells. The internal enamel epithelium, which is composed of ameloblast cells, appears as a layer of rectangular cells with nuclei at their external ends.

Description of Fig. 18.—Hertwig's epithelial sheath is regarded as a "relatively fixed point" in the early development of the root⁵. The enamel organ does not possess any blood vessels; they lie external to it. The external enamel epithelium appears as a layer of cube-shaped cells.

Description of Fig. 19.—This figure shows the manner of root bifurcation. Hertwig's epithelial sheath has been described as that point at which the external and internal enamel epithelium unite. By referring back to Fig. 16 it will be seen that Hertwig's epithelial sheath surrounds the original root opening into the dental pulp. In the beginning of root formation, projections of epithelium from Hertwig's epithelial

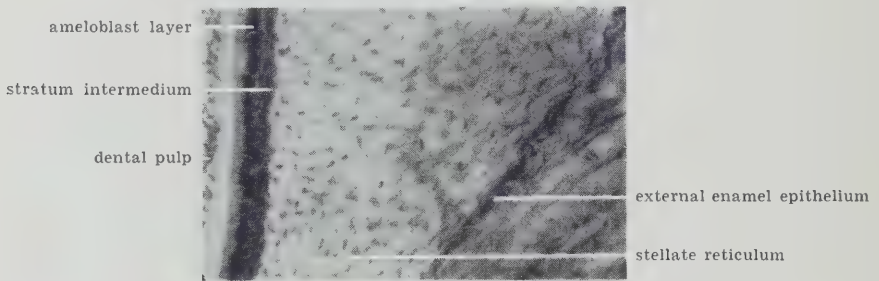


FIG. 17.—The four layers of the independent enamel organ of a lower molar of a 125 mm. human foetus, sectioned bucco-lingually. X264.

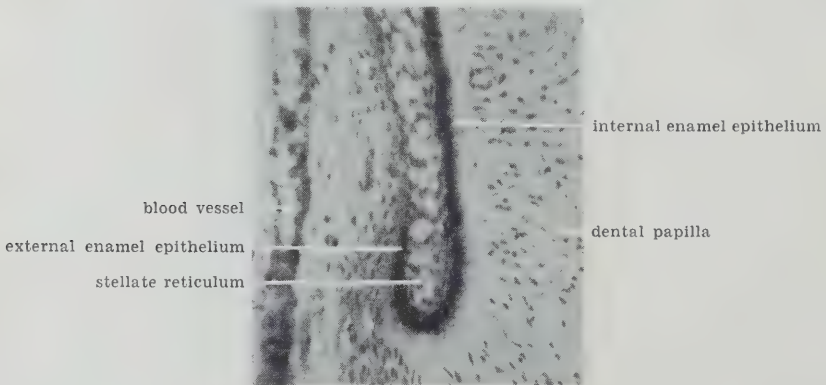


FIG. 18.—Hertwig's epithelial sheath of an independent enamel organ of a lower incisor of a 190 mm. human foetus, (approximately six months), sectioned labio-lingually. X264.

A Photomicrographic Study of Tooth Development

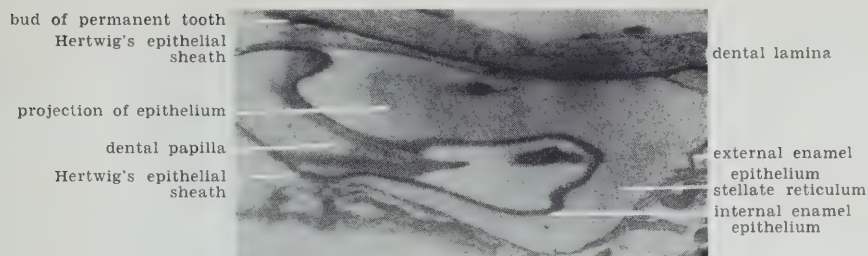


FIG. 19.—Tooth germ of a lower second molar of a 180.0 mm. human foetus (approximately 5¼ months), sectioned bucco-lingually. X20.

sheath extend into the tooth germ and eventually unite with each other. Thus the original root opening is divided into two root canals and the bifurcation of the root is complete. (Fig. 20.)

Description of Fig. 20.—The projections from Hertwig's epithelial sheath are united and as a result the root canals are formed. These projections are considered to be "the relatively fixed points" of development⁶. The stellate reticulum has been torn during the preparation of the section. No further sign of root formation is recorded up to the sixth month of development.

SECTION IV. B. ENAMEL

Origin:

Enamel is produced by the ameloblast cells. The ameloblasts form the internal layer of cells of the enamel organ. Each

ameloblast cell appears rectangular in form, with a nucleus at its external end. The internal ends of the ameloblast cells appear to terminate in a serrated line, which is the photomicrographic representation of the terminal bars. These have been described as the "thickened" ends of the intercellular substance⁷. (Figs. 21, 22, 23.)

In the early development of enamel a protoplasmic extension appears from the internal end of each ameloblast cell. This protoplasmic extension of the ameloblast cell is called a "Tomes process," which is said to be the "uncalcified" or "young" enamel rod⁸. Each ameloblast cell produces one enamel rod⁹. Calcification of the enamel rod begins at its periphery and proceeds towards the centre, therefore, that part of a Tomes process which is farthest from the ameloblast cell is calcified first. (Fig. 23.) That part of a

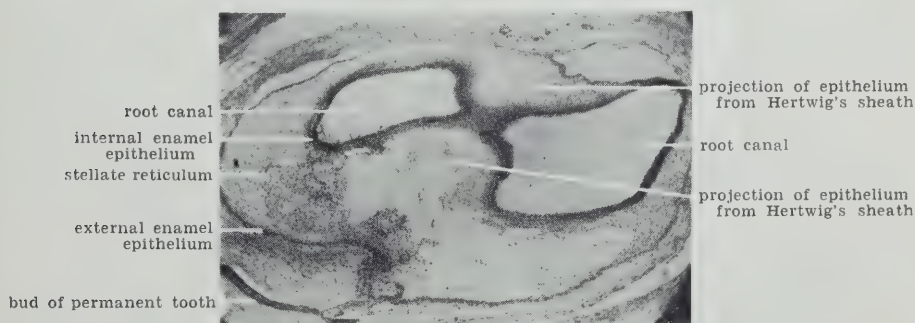


FIG. 20.—Tooth germ of a lower second molar of a 190.0 mm. human foetus, sectioned bucco-lingually. X20.

Tomes process which is nearest the ameloblast cell is the last portion to become calcified. (Fig. 23.) The cementing substance between the enamel rods is formed by elongations of the terminal bars. These elongations are actually sheaths of intercellular substance, which in section appear as fibres and are represented by the honeycomb layer¹⁰. (Fig. 22.)

Description of Fig. 21.—The terminal bars appear in section as a serrated line. The Tomes processes appear as the white layer between the ameloblast cells and the serrated line.

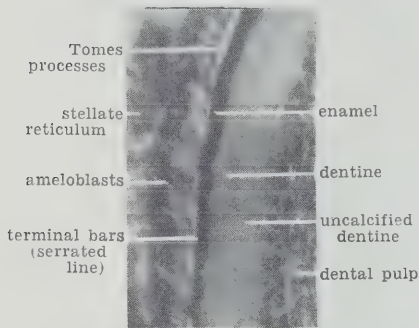


FIG. 21.—A section of tooth germ of a lower incisor of a 160.0 mm. human foetus (approximately 5 1/7 months), sectioned labio-lingually. X264.

Description of Fig. 22.—The terminal bars have been described as the "thickened" ends of the intercellular substance, which in section appear as a serrated line. "Elongations" of the terminal bars are sheaths of intercellular substance which form the cementing substance between the enamel rods. These elongations appear in section as fibres, which are represented by the "honeycomb" layer. This "honeycomb" layer, therefore, represents the cementing substance. The serrated line and the "honeycomb" layer are intimately associated because the former represents the terminal bars and the latter represents elongations of the terminal bars. The "honeycomb" layer is not

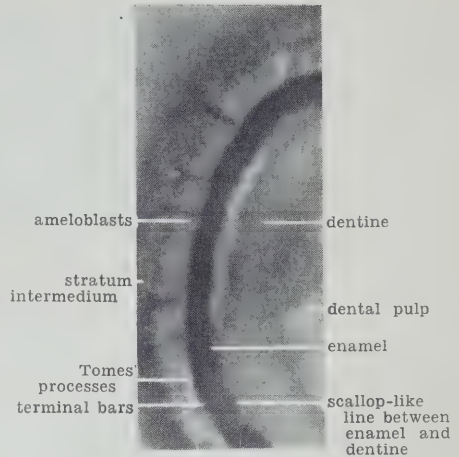


FIG. 22.—A section of tooth germ from a lower incisor of a 160.0 mm. human foetus, sectioned labio-lingually. X264.

marked in this figure but can be seen in the upper half of the picture. The scallop-like line¹¹ between the enamel and dentine, the origin of which is still a controversial subject, can be seen.

Description of Fig. 23.—The intercellular substance appears as a space between the two ameloblast cells, except at their lower or internal ends, where it is "thickened" to form the terminal bars. These terminal bars appear in section as the serrated line. (Fig. 21.)

In this figure the size of the nuclei is much smaller in proportion to the size of the cells.

Description of Fig. 24.—Tomes process is said to be the "uncalcified" enamel rod⁸. The terminal bars are "frames" of intercellular substance which surround the internal ends of the ameloblasts.

Significance: Enamel persists throughout the life of the tooth and serves for the protection of the tooth's crown.

SECTION V.

A. THE DENTAL PULP

Origin:

The dental pulp arises from the dental papilla.

A Photomicrographic Study of Tooth Development

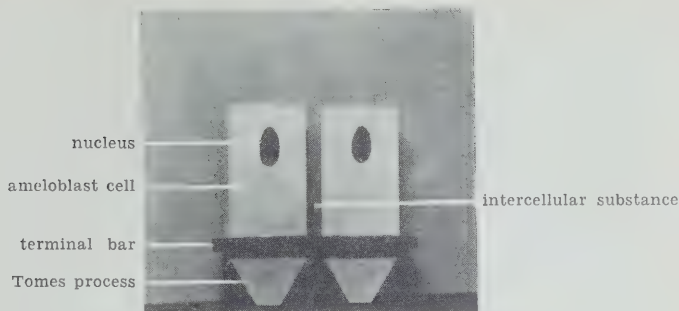


FIG. 23.—*Photograph of models of ameloblast cells, fashioned after Orban's diagram.*¹²

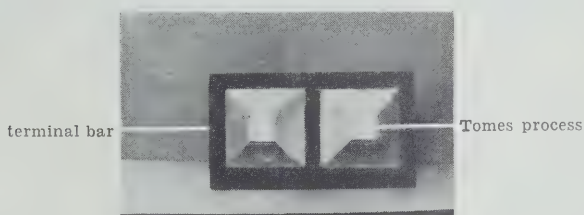


FIG. 24.—*Photograph of model of ameloblast cells, fashioned after Orban's diagram*¹² *and viewed from its lower or internal aspect.*

Significance:

The dental pulp gives origin to the dentine.

The dental pulp has the appearance of a network of cells and fibres. The intercellular substance appears homogeneous and is said to be of a fluid consistency.

Types of cells in the dental pulp:

1. Stellate cells. These are starlike in outline, with a large nucleus and with branching and anastomosing processes. These cells form the bulk of the pulp tissue and together with the various types of fibres found in the pulp are known to form a supporting tissue for blood vessels and nerves. (Fig. 25.)

2. Odontoblast cells. These are rectangular in outline, with their nuclei at the pulpal ends of the cells. Forming a layer about the periphery of the dental pulp, these cells produce Tomes fibres and thus aid in the production of dentine. (Fig. 26.)

3. Orban¹³ claims that other cells are

found in the pulp, namely, mesenchyme cells without differentiation, wandering cells, and histiocytes.

Types of fibres found in the dental pulp:

1. von Korff fibres¹⁴. These have a "corkscrew" appearance. They appear between the cells of the dental pulp. They stain black with nitrate of silver and for this reason are called "argyrophil" fibres. (Fig. 27.)

2. Collagenous fibres¹⁴. These appear in the dental pulp and are said to be present in the dentine.

Description of Fig. 25.—The stellate cells with their branching and anastomosing processes are characteristic of dental pulp tissue.

Description of Fig. 26.—The odontoblast cells are rectangular in outline, with their nuclei at the pulpal ends of the cells. The fibres extending between the odontoblast cells in this figure are Tomes fibres, which have been torn away from

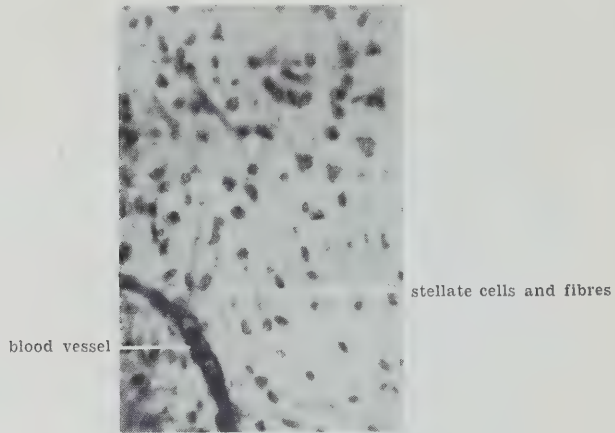


FIG. 25.—Section of dental pulp of a lower incisor of a 125 mm. human foetus, sectioned labio-lingually. X440.

the dentine during the preparation of the section.

Description of Fig. 27.—The von Korff fibres appear as "corkscrew" fibres. The odontoblast cells which intervene between the dental pulp and dentine are not visible in this figure because a specific stain for von Korff fibres was used.

SECTION V. B. DENTINE

Origin:

Dentine is derived from the connective tissue of the pulp¹⁵.

Significance:

The dentine forms the bulk of the tooth and becomes its organ of sensation.

In the development of dentine three

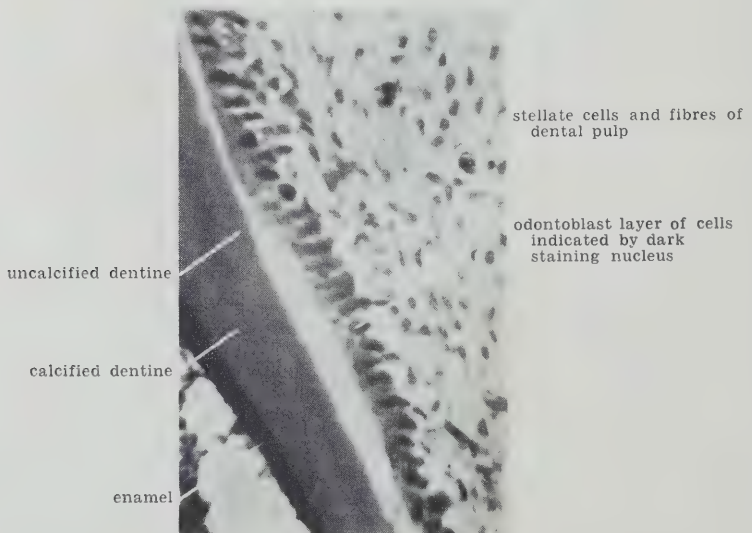


FIG. 26.—Section of tooth germ of a lower incisor of a 190.0 mm. human foetus, sectioned labio-lingually. X440.

A Photomicrographic Study of Tooth Development

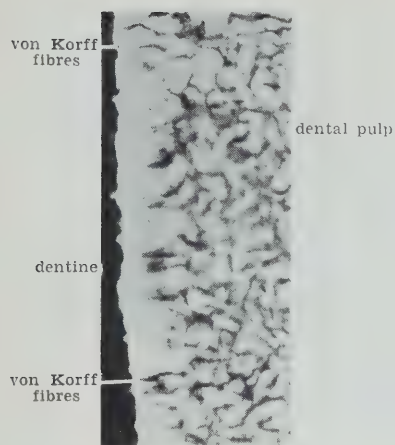


FIG. 27.—A section of dental pulp of a lower molar of a 190.0 mm. human foetus, sectioned bucco-lingually. X660.

stages are recognized, namely:

1. The formation of a fibrous matrix. (Fig. 28.)
2. The formation of uncalcified dentine. (Fig. 29.)
3. The formation of dentine as a calcified tissue. (Fig. 30.)

Description of Fig. 28.—This figure shows the formation of the fibrous matrix, which is the first stage in the development of dentine. Here the odontoblast cells are reproduced indistinctly. The fibrous matrix is said to be composed of fibres of the collagenous type, which are transformations of the argyrophile fibres, and which later become calcified¹⁶.

Description of Fig. 29.—This figure shows the second stage in the development of dentine, and the uncalcified dentine appears as a gray layer. Several layers of the enamel organ are also shown.

Description of Fig. 30.—This figure shows the third stage in the development of dentine and a marked differentiation is noted between the uncalcified and the calcified dentine.

Calcified dentine is composed of tubules. Through each tubule passes a fibril, which is called a Tomes fibre, and

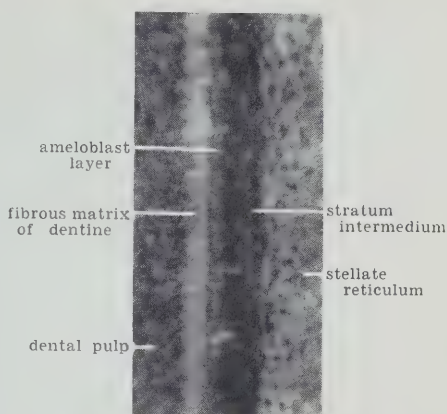


FIG. 28.—Fibrous matrix of dentine in lower molar of a 160.0 mm. human foetus, sectioned bucco-lingually. X264.

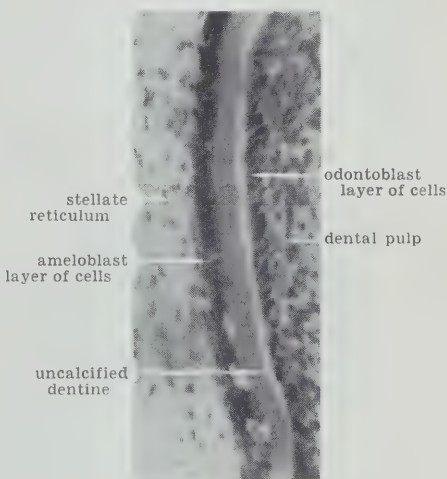


FIG. 29.—Uncalcified dentine in a lower incisor of a 125 mm. human foetus, sectioned labio-lingually. X264.

which is a continuation of an odontoblast cell. The tubules of the dentine pass outwards at a right angle from the periphery of the dental pulp.

Description of Fig. 31.—The tubules in dentine appear as dark fibres. The matrix of the dentine appears as the lighter shaded areas between the tubules.

Description of Fig. 32.—The tubules in dentine appear as fibre-like structures.

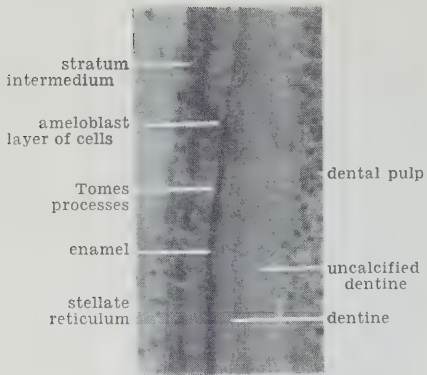


FIG. 30.—Dentine in a lower incisor of a 140.0 mm. human foetus (approximately 4½ months), sectioned labio-lingually. X264.

The lighter areas between the tubules represent the matrix of the dentine. Through each tubule passes a fibre, which is called Tomes fibre, and which is a continuation of an odontoblast cell.

Description of Fig. 33.—In this figure some tubules are sectioned obliquely. The

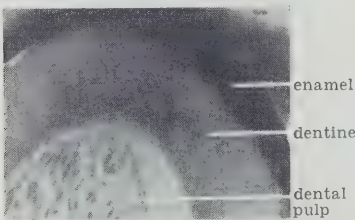


FIG. 31.—Tubules in dentine of a lower incisor of a 190.0 mm. human foetus, sectioned labio-lingually. X440.

tubules in cross section appear as large white dots. The peripheral boundary of each white dot represents Neumann's sheath, which is the lining of the tubule. Tomes fibres appear as the smaller, black dots within the larger white dots.

Description of Fig. 34.—The interglobular spaces appear as the detached, dark areas. These so called interglobular spaces are believed to be areas in which the calcification of calcium salts is either incomplete or lacking¹⁷.



FIG. 32.—Tubules in dentine of a lower incisor of a 195.0 mm. human foetus, sectioned labio-lingually. X440.

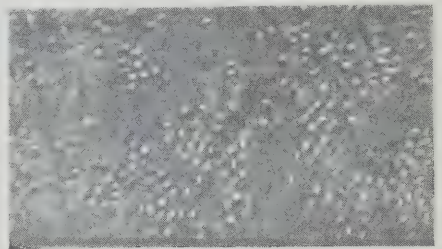


FIG. 33.—Dentine tubules in cross section. X440.

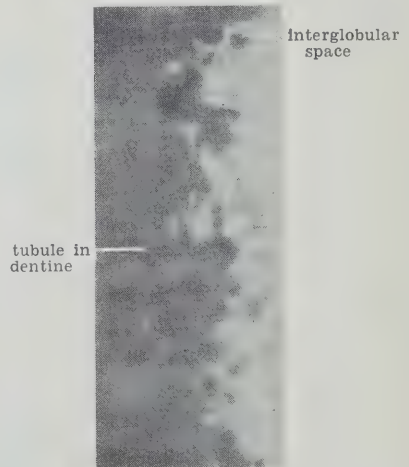


FIG. 34.—Interglobular spaces in dentine. X660.

Description of Fig. 35.—This figure shows that the development of dentine

A Photomicrographic Study of Tooth Development

bud of permanent tooth

enamel

dentine

dental pulp

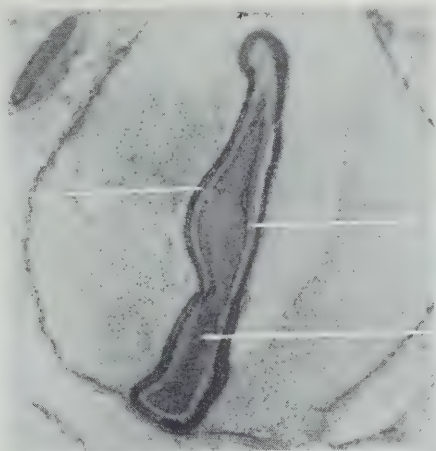


FIG. 35.—Tooth germ of a lower incisor of a 125.0 mm. human foetus, sectioned labio-lingually. X60.

occurs earlier than that of enamel; the dentine appears as a well formed structure while the enamel is but a thin black line.

Description of Fig. 36.—In this figure further development is shown.

Description of Fig. 37.—At this stage dentine and enamel are well developed.

Description of Fig. 38.—This figure shows the development of dentine and enamel at the cusps of a lower molar.

Description of Fig. 39.—The external enamel epithelium is approaching the stratum intermedium. In other words, the stellate reticulum is disappearing.

Description of Fig. 40.—The stellate

dental lamina

dental pulp

uncalcified dentine

dentine

enamel

bud of permanent tooth

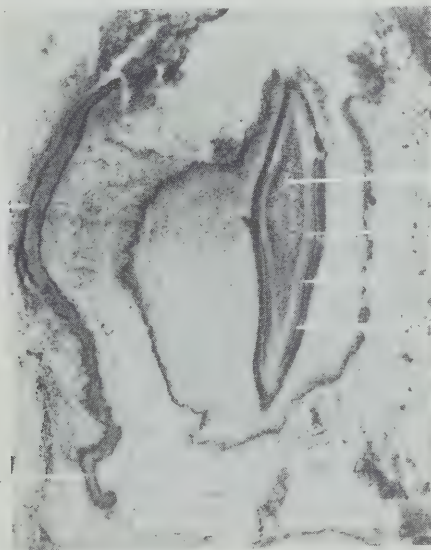


FIG. 36.—Tooth germ of a lower incisor of a 140.0 mm. human foetus, sectioned labio-lingually. X60.

reticulum has disappeared at the superficial surface of the tooth germ. With its disappearance the external enamel epithelium, the stratum intermedium, and

in Fig. 40. The united epithelium consists of a union of three layers, namely, the external enamel epithelium, the stratum intermedium, and the internal enamel epithelium.

SECTION VI.

SUMMARY

In this study the name, elementary epithelial tissue, is given to the dental lamina because of its significance throughout the early developmental stages of the tooth germ. The first sign of development appears about the second month, when the dental lamina marks the beginning of the tooth germ. At approximately $3\frac{1}{4}$ months, the dental lamina is seen to be a continuous band of epithelium attached to each tooth germ, and the tooth germ is seen to possess definite form. Also, at this time, the tissues of attachment are well established. The primary tissue of attachment is considered to be the dental lamina, because it passes directly from the oral epithelium to the tooth germ. The secondary tissue of attachment is considered to be the lateral enamel strand, because it extends from the

the internal enamel epithelium are united. The result of this union is called "the united epithelium"¹⁸.

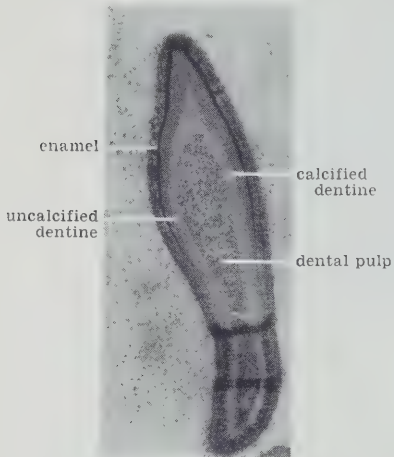


FIG. 37.—Tooth germ of a lower incisor of a 140.0 mm. human foetus, sectioned labio-lingually. X60.

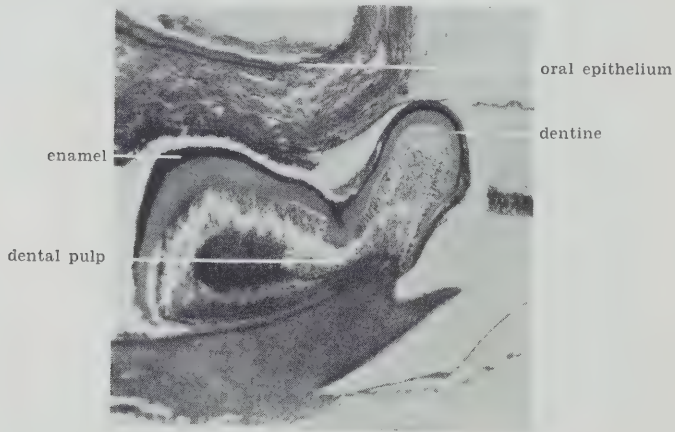


FIG. 38.—Tooth germ of a lower molar of a 180.0 mm. human foetus, sectioned bucco-lingually. X60.

Description of Fig. 41.—Higher magnification of the "united epithelium" seen dental lamina to the tooth germ and thus is attached indirectly to the oral

A Photomicrographic Study of Tooth Development

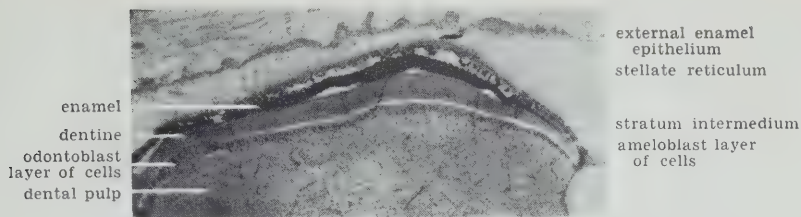


FIG. 39.—Development of enamel at cusp in a lower molar of a 190.0 mm. human foetus, sectioned bucco-lingually. X88.

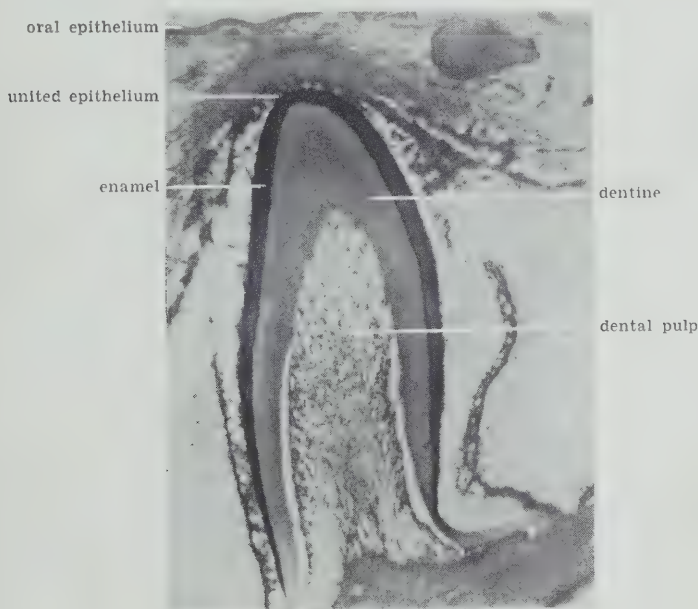


FIG. 40.—Tooth germ of a central lower incisor of a 200.0 mm. human foetus (approximately 6 months), sectioned labio-lingually. X100.

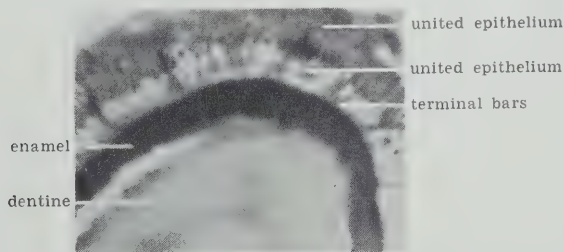


FIG. 41.—Section of tooth germ of a lower incisor of a 200.0 mm. human foetus, sectioned labio-lingually. X264.

epithelium. At this stage, too, the enamel and development of the bud of the permanent tooth is already beginning.

At approximately $3\frac{1}{2}$ months, the enamel organ appears to have separated from the dental lamina, which is in the early stage of disintegration. This breaking-down process is more evident about $3\frac{3}{4}$ months, when the epithelial coils are well marked. At approximately 4 months is seen the advanced stage of disintegration of the dental lamina.

The name, accessory epithelial tissues, is given to those structures of the tooth germ which appear to be of secondary importance during the developmental process, in contrast to the dental lamina. The accessory epithelial tissues include the lateral enamel strand, the enamel niche, the enamel knot, the enamel cord, and the enamel navel.

The lateral enamel strand is the first of the accessory epithelial tissues to develop. Then follow in order the development of the enamel niche, the enamel knot, the enamel cord, and the enamel navel. The significance of the lateral enamel strand is that it forms the lateral boundary of the enamel niche and that it is considered to be the secondary tissue of attachment between the oral epithelium and the enamel organ. Nothing definite is known about the enamel niche, the enamel knot, the enamel cord, or the enamel navel, except that they disappear as definite structures at an early stage of development.

The dental papilla appears by a grouping of connective tissue cells at the deep surface of the enamel organ, and its outline is definite at $3\frac{1}{4}$ months. The dental papilla follows the shape of the developing enamel organ and eventually becomes the dental pulp of the independent tooth germ.

The enamel organ is independent of the tissues of attachment at $4\frac{1}{7}$ months. The enamel organ is seen, at this time, to consist of four distinct layers, which are named, from the external to the internal layers:

1. The external enamel epithelium, composed of cube-shaped cells.
2. The stellate reticulum, composed of branching, star-shaped cells.
3. The stratum intermedium, composed of cube-shaped cells.
4. The internal enamel epithelium, composed of ameloblast cells, which are rectangular in outline.

The enamel organ does not contain any blood vessels; they lie external to the external enamel epithelium.

Hertwig's epithelial sheath appears in the early stage of development, at approximately $4\frac{1}{7}$ months. The first indication of root formation in the case of a lower second molar appears at approximately $5\frac{3}{4}$ months. The root openings are formed by projections from Hertwig's epithelial sheath, which extend into the tooth germ and eventually unite with each other. These projections are said to be "the relatively fixed points" in the development of the root. No further sign of root formation is recorded up to the sixth month.

The formation of enamel is brought about by the activity of the ameloblast cells, which form the internal enamel epithelium. The ameloblast cell is rectangular in outline with the nucleus at the external end of the cell. Between each ameloblast cell and its neighbour is an intercellular substance, which is not shown photomicrographically except at the internal ends of the cells, where it is thickened, and to which is given the name, terminal bars. These structures appear in section as a serrated line. Elongations of the terminal bars are actually sheaths, which form the cementing substance between the enamel rods. These elongations appear in section as fibres, which are represented by the honeycomb layer. From the internal end of each ameloblast cell a protoplasmic continuation of the cell occurs. These continuations of the ameloblast cells are Tomes processes,

which are said to be the "young" or "uncalcified" enamel rod. Calcification is said to begin at the periphery of the rod and proceeds towards the centre. Each ameloblast cell is said to produce one enamel rod. During the development of enamel the stellate reticulum gradually disappears, until finally the external enamel epithelium, the stratum intermedium, and the internal enamel epithelium are united, and thus is formed the "united epithelium."

The dental pulp, which arises from the dental papilla, gives origin to the dentine. A composite picture of the dental pulp resembles a network of cells and fibres. The bulk of dental pulp tissues is composed of stellate cells, with branching processes, which form an anastomosis with similar processes from adjacent cells. An intercellular substance, which is not recorded photographically, is said to lie in the meshes of the network. Throughout the dental pulp are scattered fibres of various types. Perhaps the chief type is the collagenous fibre. The von Korff fibre, which resembles a "corkscrew" in outline, is scattered throughout the pulp tissue. A layer of specialized cells, the odontoblasts, border the periphery of the pulp. Each odontoblast cell is continued from its external end in the form of a protoplasmic fibril, which is termed Tomes fibre, and which passes through the dentinal tubule.

In the development of dentine three stages are recognized. The first stage is the formation of the fibrous matrix, which is shown in the case of a lower second molar of approximately 5 1/7 months. The second stage is the formation of uncalcified dentine. The final stage is the formation of calcified dentine. This tissue is composed of tubules which extend outwards at a right angle from the external surface of the pulp. Through each tubule passes a fibril, which is a protoplasmic continuation of an odontoblast cell. In

the dentine of the crown of the tooth are interglobular spaces. These are thought to be areas of incomplete calcification.

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I am also indebted to many of my friends for assistance in various ways, especially to Dr. Brian Bird, for reading and correction of the proofs; Dr. L. P. Gendreau, for suggestions in Laboratory Technique; Dr. Noel Rawson, for suggestions as to procedure; Dr. S. J. S. Pierce, for suggestions as to photography; Miss Hazel Metson and Miss Marjorie Copeland, for copying the manuscript; and to all others who have assisted in any way in the preparation of this paper.

Human Progress

by FREDERICK E. WARRINER, D.D.S., Winnipeg, Manitoba*

IN THE September edition of the Journal of the Canadian Dental Association, an editorial appeared under the heading, "The Future of Dentistry in Canada." It began with this statement,— "What a hundred years has done for the dental profession," reads like a fairy story. Would it not be in order to write another article under the heading, "What the dental profession has done for the people during the last hundred years." This might not read like a fairy story.

We know that the profession has enjoyed a fairly good living, but in doing so has not served more than a very small percentage of the people. We know that reparative dentistry is expensive and beyond the average family man's ability to pay. This is not the fault of the profession, but it does present a challenge to us: "How are we going to serve the masses that are in need?" There are two ways open to us. One is by government help which means socializing the profession. The other and better way is by prevention of dental decay. If it were possible to see that all expectant mothers were properly cared for and all children of school age and especially those of pre-school age were properly fed and cared for, the expensive part of dentistry would be greatly reduced. This being the case, why should not our constant efforts be applied to this phase of our profession?

The health of our community should be our first consideration. We make spurts periodically in this direction but

we lack concerted effort. Why not plan our future along these lines and then, without ceasing, work for the fulfilment of this plan? An organized body or bodies working as such can accomplish so much more than individuals working as individuals.

The Journal of the Canadian Dental Association can and should be of inestimable value in placing before our profession the chief objectives of that profession. What are our main objectives? Is it to render dental service just to better our own material gains? Is it to improve our technique to serve better those who are already able and willing to pay for our service, or, have we a greater mission in life?

In the August edition of Oral Health, an article appears by E. C. McBeath, D.D.S., M.D., under the heading "Dentistry for Children," in which he says, "Our greatest problem at this time is an economic one, and must be solved by the dental profession so that dental service may be furnished to the many thousands of under-privileged children, particularly in larger centres. More service clinics must be financed and established to serve more children and, if necessary, dentistry must donate more liberally of its services, to alleviate this appalling condition before more drastic measures are adopted."

The greatest challenge to our profession is the education of the masses and the bringing to them of dental health within their ability to pay.

* EDITOR'S NOTE:—Dr. Warriner, Winnipeg School Trustee and a former mayor of the City, is Chairman of the Winnipeg Child Health Board. This Board is made up of representatives from the Public School Board, the Medical and Dental professions, and the City Health Department, and acts in an advisory capacity to the latter organization. As a result of this connection Dr. Warriner has had an unusual opportunity to study the needs of the populace from a dental standpoint.

Another problem facing us, as dentists, is that of our various civil employees. Very few seem to realize the cost of substitution for which we indirectly pay, nor do they realize the part that infected teeth play in this loss. As an illustration take the case of our own School Board. Approximately twenty-five thousand dollars is spent annually to take care of employees who substitute for eleven hundred regular teachers in our school system. A certain amount cannot be avoided, but the loss is terrific, especially if this, or a large part of this loss can be eliminated. There are also other losses such as lack of efficiency in the service. Few substitutes can give as good service as a regular employee. Thus the whole system suffers.

Our profession pays little or no attention to this problem. How then can we expect "laymen," elected to run our country affairs, to be enlightened on this most important subject?

At a recent meeting, dealing with the health of children, a remark was made that if the Public Health Department continued in immunization and other forms of prevention of disease, the professions would soon be out of work. This may have been said as a joke, but expresses the opinion of many.

Let me ask this question. If we can prevent disease, and if we can prevent the necessity for dental restorations, is this not then our first consideration? Should anyone be barred from health due to lack of wealth? Your answer and mine is emphatically, "No." Yet, what

are the professions doing about it? Some say, "Look at the unemployed services;" "Look at the school services." Yes, look at them first, but this is only scratching the surface. This might have been sufficient yesterday, but will not do tomorrow.

Are we, as a profession going to lead the way? Are we honestly making an effort to solve this problem? If so, does the public know? If not, the time will come when we will be guided and instructed by men outside of the profession.

In trying to bring these problems to a head, at the present time one is met with that all convincing argument, "Let's win the war first." Surely, nothing must interfere with that goal. At the same time, we must not lose sight of the fact that wars do not last forever. There is always a day of reckoning, and for this, the country must be prepared.

The boys come home to what? Let us not forget the aftermath of the last war. Let us be prepared for the readjustment of the army to civil life. Jobs must be ready, there must be such a supply of work and it must be so well organized that little or no depression will follow the signing of peace.

There is a harvest of work for the men of our profession; necessary work;—health service work, work that will pay dividends to the country at large if plans are made now, if the seed is sown now. Now is the time for the leaders in our profession to catch this vision and to act. "This is human progress."

Conventions

MIDWINTER MEETING OF THE CHICAGO DENTAL SOCIETY, PALMER HOUSE, CHICAGO, FEBRUARY 23-26, 1942.

11TH ANNUAL MEETING OF THE ONTARIO DENTAL NURSES' AND ASSISTANTS' ASSOCIATION, ROYAL YORK HOTEL, TORONTO, MAY 18-21, 1942.

Rural School Dental Service*

by M. A. CAMPBELL, Editor, Canadian School Journal, and Secretary,
Ontario Ratepayers and Trustees Association

PUBLIC service is of little consequence if it is not accepted by the people. Health is recognized as an important part of our educational system. In the new courses of study it occupies a very important place commanding one half hour per day in the elementary schools. It is given equal importance with general science or agriculture in Grade IX and is one of the obligatory subjects in Grade X, XI and XII in the secondary schools.

In 1940 more draftees to American Military Service were turned down as unfit for service because of dental disease than for any other physical disability.

In examining children in Canadian primary schools, it has been found that 95% of the pupils have defective teeth with an average of one permanent tooth needing extraction. In cities and towns where public dental service is in operation in schools, this figure has been reduced to as low as 65%; and among those affected the extent of damage by cavities is greatly diminished. Further, oral sepsis has been reduced from as high as 50% to nearly a vanishing point. In case of pre-school children it has been shown that in an ordinary group of children between three and five years of age 50% have cavities and that there is an average of five cavities per child.

Education alone will not improve conditions as they exist. Some further action must be taken if the rising generation is to benefit from present day knowledge and experience in health matters.

In large centres of population, organizations are working to benefit youth.

Public health workers, school boards, boards of health and service clubs are rendering good service in protecting youth. Sixty or seventy per cent of the youth of the primary schools in larger municipalities are served by medical and dental inspection and in many cases treatments are provided.

What about the smaller urban centres and rural areas where 50-60% of our population resides? Provision is made for school boards to carry on the work and in the case of dental inspection and treatment a 30% government grant is available and the necessary machinery for carrying it into effect is provided for by the Department of Education. This service is practical and economical for the smallest school board in Ontario as shown in the following instance.

In 1938 the school board of S.S. No. 8 Nelson Township, Halton County, decided to carry on a system of medical inspection. At their own expense and without government grant they engaged a local physician to make a medical examination of all the children. This inspection was carried on for two years. Reports were sent home to the parents but defects were not corrected.

In 1940 the school board decided to try out a plan of a definite type of health program by which results could be accomplished, namely dental inspection and treatment.

The plan set out by the Ontario Department of Health and encouraged by the Ontario Dental Association was presented to the school board. After con-

* Prepared for and approved by the Public Dental Health Committee of the Ontario Dental Association.

siderable discussion it was decided to present the matter to the annual school meeting. It was decided at the annual school meeting to have a dentist visit the school, make an inspection and give a talk to the pupils.

In the early part of June 1940 an inspection was made and a card filled out in duplicate showing the defects. One card was given to the child to take home and the other was retained by the teacher. The examination showed that 75% of the pupils had defective teeth. The board took advantage of the authority given in the Schools Act 89 which states "that the board shall have power, if deemed expedient, to provide surgical treatment of children attending the school suffering from minor physical defects where, in the opinion of the teacher, the defect interferes with the proper education of the child and to include in the estimates for the current year the funds necessary for cases where the parents are not able to pay, provided that no such treatment shall be undertaken without the consent of the parent or guardian of the child." It was the feeling of the board that all children should receive the same consideration.

Application was made to the local Board of Health and the approval was given by the Director of Dental Services of the Department of Health. In June each child, whose report showed that he had defective teeth, was given an order signed by the secretary of the school board indicating that the board would pay, out of school funds, for needed fillings and necessary extractions. An agreement was made with the dentist as to the time most suitable and a standard fee was arranged on a time basis.

A statement was also signed by the parent that it was agreed to have the necessary fillings and extractions made by the dentist under the authority of the school board, the service to be paid for by the school board.

The children were asked to attend a

dentist in the local town during holidays. Privilege was given to attend any dentist but to simplify the work of the board one dentist was suggested. The result was that by the middle of September all the children had their teeth attended to. An account was sent to the board by the dentist which was forwarded to the local Board of Health and in due time the school board received the grant of 30% from the Department of Health through the local Board of Health.

This work was continued in 1941 and at the present time (September 1, 1941) every child of school age in the school section has a healthy mouth. The local dentist has agreed to visit the section during the coming winter and give an illustrated lecture to the parents and pupils on the care of teeth which will combine the practical and the educational system in the care of the teeth—the gate-way to good health.

What was done in this school section may be done by any school section or any small urban centre in the province. The school board is the logical unit to conduct this work as they are in close contact with the people and may govern local arrangements. It is democratic in principle—the local people helping themselves. All children irrespective of financial circumstances may receive the same advantages as their parents desire.

The Department of Education and the Department of Health are to be commended for making provision for this service in the interest of youth. School boards have a great opportunity as well as a great responsibility. Why not have this work extended? Only six rural schools in the province out of a total of 6,000 are making necessary arrangements at present.

The form of agreement varies with different localities.

The following is a suggested agreement between the local Board of Health and the School Board:

The Board of Health for Township and School Section No.
Township, have entered into a mutual agreement for a dental service covering the
inspection, filling, and where necessary, extraction, of teeth for pupils in attendance
at the school.

To, Department of Health
Parliament Buildings, Toronto

.....
Secretary, Board of Health

.....
Secretary, S.S. No.

.....
Agreement between parent and dentist:

To the School Board, S.S. No. 8 Nelson:

I request that the necessary fillings and where necessary extraction of teeth for
..... be done by the dentist under authority of the school board of
S.S. 38 Nelson, the work to be paid for by the board.

.....
Parent or Guardian

.....
Agreement between school board and dentist:

To Dr.

This child's teeth have been examined by a dentist and found defective. Kindly
complete needed dental care, such as fillings, extractions and prophylaxis and charge
the account to the school board of It is understood your fee
will not exceed the rate of per half day period.

.....
Secretary, school board.

References:

1. Regulations for Dental Inspection in Schools pursuant to clause V of Section 5
of the Public Health Act, Department of Health of Ontario.
2. Types of Dental Services and their cost by Dr. Edmund A. Grant, Director of
Dental Health Services, Department of Health, City Hall, Toronto.

Erratum

In the October issue of the Journal there appeared an article entitled, "Vitamin
C Deficiency and the Potato" by R. W. H. Tavenner, L.D.S., of Birmingham Dental
Hospital, England, which was copied from an incorrect statement in the British
Dental Journal. Mr. Tavenner advises us that there was a mistake in this article
with regard to the number of units of Vitamin C in a 3 oz. baked potato. This
should read 140 units instead of 210. We gladly make the correction.

.....
Character is the diamond that scratches every other stone.—Bartol

The Forum

• EDUCATIONAL PRINCIPLES UNDERLYING DENTAL HEALTH EDUCATION*

by JEAN LATIMER, Co-ordinator of Health Education, Division of Child Hygiene, Massachusetts Department of Public Health, Boston, Mass.

IT IS obvious that if success is to be made in promoting better dental health for all people of our nation, dental health education must be begun in childhood. Therefore, we are seeing the dental profession as well as the medical profession turning even more to the public schools as their ally in the promotion of health—and to looking forward to a future in which the adults, as a result of a more adequate background of social and scientific insight regarding the dental as well as the other health phases of their lives, will have something which cannot be so successfully conveyed to them in a moment and which is the process of gradual enlightenment.

Moreover, it is heartening to observe the growing recognition that all specialists concerned with promoting dental health in the elementary schools should come up to the standards set for general health education specialists and to observe that some states are even carrying out such educational and scientific requirements by law.

But such educational objectives will never be reached merely by the child's verbally learning the known facts which have to do with dental health. We must apply the knowledge gained from the newer researches concerning child growth and development. Fortunately, we are passing from the emphasis on such

desultory devices as competitions, campaigns, prizes, etc., which in themselves have not proven adequate, and are now beginning to look at school dental health education as an integral part of the modern functional school curriculum.

Since we learn to live by living, the activity program in health education in which the dental health areas are selected in terms of the needs, interests and abilities of children of each grade level is making it possible to think of dental health not as a thing apart from the general health education curriculum, but as a part of the unit method of teaching health, which, if used properly, would seem to have within it all the intrinsic motivation necessary for accomplishing results.

The dental health teaching which we have experimentally developed in some of the schools in Massachusetts are examples of this new type of teaching.

All health educators realize that in order for health teaching to actually carry over into health behaviour, both the adult and the child must be actually motivated to carry out the health practices desired.

What are some of the motivations which will help us in the teaching of dental health? This we do know—that successful motivations must be connected with what children want here and now. We cannot rely on deferred values.

Psychologists tell us that there is not much abstract reasoning into the cause and effect relationship of health below the twelfth year. This means that in the elementary schools we will have to rely on connecting our dental health programs

* Read at the meeting of the Section for Dentists and Dental Hygienists of the American Association for Physical Education, Health, and Recreation, at Boston, Mass., March 28, 1940. — *Bul. Nassau County D. Soc.*

with the other natural interests of the child.

Even at the adolescent age we still have to use the personal interests of the boys and girls. What will happen in the distant future to a high school girl's teeth really is of less concern to her than we think. However, she is very much interested in the personal appearance approach; for example, we have found the slogan "Protect Your Smile" very effective at this age level.

Good teeth as a factor which enters into employability has also been used as a motivation with high school boys and girls. The fact that the condition of an applicant's teeth is taken into consideration in Civil Service examinations and in entering the United States Naval Academy has been used as a successful motivation during the high school period.

The set of posters for this age level which has been distributed this past year by the Massachusetts Dental Foundation is a good illustration of an effective appeal to high school students.

A successful school dental program must be based on the actual knowledge of the dental health needs of each child. In Massachusetts we have been promoting the school dental survey for bringing to the attention of the child, the nurse, the teacher and the parents the actual dental conditions that exist in the mouth of each individual child.

Moreover, psychology is today emphasizing the fact that learning goes on all the time. Therefore, we must base our programs more on the entire aspect of the child's life, in his relationship to his dentist, to a clinic, to his school, to his teacher, to his parents and to his home.

We must recognize that a favourable impression which the teacher may help the child create toward the dentist may be spoiled by a dentist who doesn't understand child psychology and who frightens the child while in the dentist's chair.

Again, through the co-operation of the parent, the teacher and the dentist, a constructive attitude may be developed towards preventive dental care which will continue all through life.

We must become more realistic in our school health education program. No amount of emphasis in the school on a child's brushing his teeth can really be successful unless that child actually owns a toothbrush and some co-operation is established with his home so that he is able, with some facility, to actually brush his teeth.

Moreover, it is ineffectual for the teacher to stress milk and oranges if such foods are not within the family budget.

However, by the growing close relationship between the classroom teacher and the public health nurse, teachers are now knowing what are the home conditions as they affect the health practices of each child.

The school nurse, through her education in the home and through her interpretation of actual conditions to the teacher, becomes the great liaison health education officer.

Again, there must be satisfaction in the act performed. Health teaching, to be successful, must arouse interest and must produce an emotional attitude of satisfaction in the child.

One reason for prophylactic treatment of the teeth is that the child will get a satisfaction from the treatment so that afterwards he carries on better home care of his teeth.

We should question the success of our educational procedures when we see the same school children year after year having prophylactic treatment, without showing any improvement. If we really did a good educational job wouldn't we reach a larger group by extending this service each year to a different group of children? Also, dental health must be recognized

as a community problem based on individual responsibility.

No new techniques of teaching—important as they are—will ever be successful unless we have at the same time a functional approach to the life of the child as he lives day by day in his relationship to the community—with reference to all the factors which influence his health.

Motivation for the correction of dental defects in the schools will be of little avail unless there are established in the community resources for the correction of dental defects. Thus, dental service and health education must go hand in hand—emphasis on one without the other is bound to be ineffectual.

Already it is heartening to see the interest of educators as well as leaders in the dental profession in providing more facilities for children whose parents cannot afford dental corrections. We call to mind a rural superintendent who made arrangements with his own dentist for the dental correction of a high school boy who wanted to get his mouth in good condition before he graduated. This superintendent drove the young boy to the nearest city in the late afternoon one day a week over a long period so that these dental corrections could be made.

In dental health education we cannot think of the individual outside of his social relationships and contacts. Training in specific dental health habits has an important place in the health program, but it is not the center. The heart of the problem would seem to be to teach the individual to co-operate intelligently and effectively with the professions and social institutions—the medical profession, the dentists, the nurses, the public health departments, etc.—which exist for the conservation and upbuilding of health.

Therefore, would it not seem that in the future in looking at our methods of

health education we must make more of a study of the organized community and its modes of action which will secure better institutional adjustments for dental health?

Thus, dental health as a part of general health education reaches out into the community and should become a part of its social organization. The school cannot by itself carry on a successful dental health program any more than it can carry on a general health education program. It requires the co-operative support and action of the entire community—home, school and community must be co-ordinated.

• VINETHENE

by Major BERTRAM S. ROTHWELL in the
Military Surgeon 86: 452, May, 1940

IN THE past fifteen years 67,853 patients were anaesthetized with vine-thene without a fatality. For rapid induction and prompt recovery with a minimum of post-operative effect this clear, almost colourless liquid, which has a characteristic odour which reminds one of a crushed lemon rind, is of greatest value. It is also useful to supplement gas anaesthesia when relaxation is needed. This anaesthetic is also used to maintain very light anaesthesia, which is termed total analgesia.

The open drop method and the method of vapourizing it in the machine with nitrous-oxygen was used. The induction is as rapid as with any anaesthetic gas and much more certain than with nitrous oxide. Unconsciousness usually occurs within 20 to 45 seconds after the first inhalation. The most resistant patients sink into anaesthesia quietly and promptly, there is no cyanosis and no anoxemia. The patients rarely vomit, they do not sweat, and are able to walk into an adjoining room as soon as the operation is completed.—T. J. Cook, *per Am. Jour. of Ortho. and Oral Surgery.*

• ORAL PROPHYLAXIS

by MARY SIRIANNI CECI, D.H., Milwaukee, Wisconsin

TEACHING children the correct way of brushing their teeth is not a difficult task. Children not only grasp instructions readily and eagerly but they are born mimics. There is nothing they like better than to show off something new that they've learned.

When a child is given his appointment for his first prophylactic visit he is asked to bring his own toothbrush with him. Then, at this visit, he is shown with a hand mirror how his teeth look before they are cleaned, and again on the completion of the prophylaxis, so that he may see the results for himself.

At the finish of the prophylactic treatment he is handed his toothbrush. I take mine, and we walk over to the wash-bowl. I ask him to grasp his toothbrush firmly in his fist and to follow my movements with the toothbrush as closely as possible. Where necessary, I guide the child's hand through the proper motions. We begin by opening our mouths wide and placing the toothbrush as far back in the mouth, and as high up on the gum, as it will go. Then, with a down-sweeping motion we proceed to brush all the way around the upper arch. For the lower teeth, we reverse the process and sweep up. A good way to remember this, I tell the child, is to brush the teeth in the direction in which they grow. Up, for the lower teeth; down, for the upper teeth. Then, by tilting the brush slightly we proceed to brush the inside surfaces of the teeth in much the same manner that we used on the "outer" surfaces. Lastly, we brush the "chewing" surfaces by holding the brush very tightly against the teeth and "wiggling" it vigorously. I don't tell my patients to brush their teeth to count, nor to a certain number of minutes. I just tell them to brush until their teeth feel smooth and slippery to the tongue.

I never fail to tell my little tots why I believe the "up-and-down" method of brushing the teeth is the best.

Some years ago we had occasion to install a stoker in our home. Since the job of tending it was to fall to me the maintenance man took great pains in explaining to me just how to operate the stoker correctly. I listened intently. Suddenly he stopped talking and floored me with, "Say, you didn't get a thing I said!" Defensively I answered, "I did too!"

"Oh, no, you didn't," he said. "You know, you didn't once ask me *why* the damper had to be left open, and why the air pressure had to be at 30°. Now, if someone were to come here next week and tell you you weren't operating this stoker properly, whom would you believe? But, if you knew *why* these little gadgets had to be set a certain way you'd tell him 'take your walking papers, brother. You're talking through your hat!'"

That lesson sank home. To show or prove my point, I dab a little pumice on my fingers. I brush them straight across. What happens? The pumice has become imbedded between the fingers. Well, let's try the rotary method of brushing the teeth or fingers. We've cleaned one finger but we've imbedded the pumice under the fold of the next finger. So, now, let's try the "up-and-down" method. The fingers are clean! So, I explain to the child, that's what happens in his mouth.

I have no doubt that this lesson will remain with the child. He can return in three months, six months, or even a year for a check-up. And he'll remember every detail of these instructions. In fact, he's likely to check up on me if I slip over or gloss over some little point. But, has he in the meantime, brushed his teeth two times a day, seven days a week, as shown? Oh! That's another story!—*Milwaukee Children's Hospital, Jour. Wis. State D. Soc.*

• FINGER, THUMB, LIP AND TONGUE SUCKING

by GUTTORM TOVERUD

(Condensed from *Den Norske Tannlaegeforenings Tidende*, and translated and abstracted by Erna Gutsenstein, D.D.S.)

1. In babies, sucking is a physiologic urge and therefore not much attention need be paid to it.

2. Sucking in 2, 3 or 4 year old children is a continuance from baby habit and has its root either from a nervous or psychic action.

3. The habit will have bad results in tooth and jaw formation when present in 2, 3 or 4 year old children, and can therefore have serious psychic and physiologic effects on the child.

4. If the habit is broken in 3 or 4 year olds, the anomaly of the anterior maxilla may reduce itself and in time become normal. If the habit is not broken at the age of 5 or 6 one can be sure that there is little chance of self-correction.

5. If the habit is not broken after the first year, mechanical remedies should be considered, oral treatment should only be used in later years.

6. Experience has shown that direct local treatment will be effective without psychic damage to the child later on.

7. In psychopathic children local treatment will not be effective unless given in connection with general psychotherapy.—*Dentistry, a Digest of Practice*, August, 1941.

• EXTERNAL HEAT AND COLD THERAPY IN ORAL SURGERY

by THOMAS HENNESSY, D.M.D., Boston, Mass.
(Conclusions of paper in *Am. Jour. of Ortho. and Oral Surg.*, Sept. 1, 1941.)

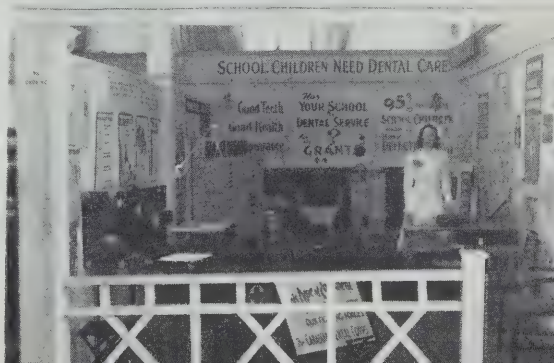
IT WOULD appear that the application of cold is limited to the early stages of inflammatory processes. When dealing with infectious processes, the temperature chart is an important guide; it is a help in determining the type of infection we are dealing with—staphylococ-

cus, streptococcus, or mixed strains. High temperatures are not to be feared as much as the cause responsible for them. High temperatures in cellulitis or infections of deep-seated origin involving the deep fascias of the sublingual and retro-pharyngeal spaces is an indication that the patient has a good resistance and is putting up a good fight. Therefore, cold which decreases the body temperature is contraindicated in such cases.

Heat stimulates all cellular activity of the body tissue and hastens all chemical reactions, thereby increasing resistance to infection. In suppurative inflammation, heat should be applied to localize the inflammation and to facilitate drainage. It is safe to say that almost all cases of oral surgery involving considerable trauma, such as difficult extractions, the removal of retained roots, alveolectomy, apicoectomy, etc., should be treated postoperatively by the application of cold, preferably the ice bag. It should be continued at one-half hour intervals until the inflammation has subsided; if the patient complains of discomfort, it may be discontinued for one hour and then resumed, or mild dry heat may be substituted. If the edema is persistent and there is a rise in temperature, and symptoms indicate the presence of infection of a deep-seated nature, hot moist compresses should always be employed: i.e., the flaxseed poultice.

Dental Education Display at Canadian National Exhibition conducted in conjunction with the Ontario Education Exhibit, 1941.

The SCHOOL DENTIST



• **WHITHER MEDICINE?**

by DR. WALLACE WILSON, Vancouver, B.C.
(Condensed from *Canadian Medical Assoc. Journal*,
August, 1941.)

THE confusion and uncertainty of today will be projected into tomorrow, and Medicine in Canada would be wise to be ready to discharge with spontaneity and without coercion its future obligations to a changed society. The pall of darkness that hangs over the world and our comparative remoteness from the tragedies of war should not blind us to the fact that these stern events will usher in profound alterations in the fabric of institutions and great changes in the individual way of living. These changes are already occurring and will continue, and a cry for security for the common man will be translated into action. Because much of individual security is dependent upon health, Medicine will inevitably become more and more involved, and this fact must be accepted. It follows that, knowing what we must retain and what we can give up, we should be ready to co-operate. Otherwise, commands will be given and regulations issued by those who know not Medicine, and the standards of practice will be lowered.

Any future health schemes should be concurred in by all interested groups and should be such as will be accepted and adhered to by all units and branches of the profession. Under our present Federal scheme of government it appears that health matters will be left largely to the provinces, and so, guided by geography, medical needs, economies and the particular genius of its people, each province will work out its own plans. All the more reason, therefore, that across Canada medical men in attempting to collaborate should have certain definite broad principles to guide them.

In the evolution of new plans or the alteration of old plans to provide medical

care there should not be too much rigidity or holding back on the part of the profession, nor should there be demands from the public that will jeopardize the provision of the "best medical care available" or that will be unfair "to all those providing the service." Increased sympathy and understanding on the part of both groups should find that happy via media which all can travel together.

If all medicine is to be united as to basic principles there must be an organization through which it can formulate plans and express itself. Such a body is the Canadian Medical Association. It is the cement that binds together the various divisions of corporate Medicine across Canada—to the public the concrete and visible evidence of our unity, to us our forum and our voice. As the official representative of Medicine, the Canadian Medical Association must, on occasion, direct and speak out, and all doctors, by being a part of its general organization, should ensure that it speaks for all, not some.

Appeals for leadership and appeals that the medical profession "do something" in the promotion of schemes that are not based on preventive medicine in its fullest sense are being heard and will continue to be heard unless we prove to all where the primary effort should lie. This primary scheme, this Preventive Medicine of the future, cannot be brought into being and carried forward to full growth by Medicine alone; the joint efforts of Medicine including public health departments will prove inadequate; the elimination of the varied individual, social and economic sources of disease can only be accomplished when all branches of Medicine, all departments of government, and all groups in the community work with and mutually support each other. So the work of education must proceed.

"Doing a common thing uncommonly well, often brings success."

• THE NEW HARVARD SCHOOL
OF DENTAL MEDICINE

by JOHN W. COOKE, D.D.S.

Member of the Committee on Instruction and Chairman of the Curriculum Committee of the Harvard School of Dental Medicine, Boston, Massachusetts.

BECAUSE of the numerous and conflicting statements that have been made about the new Harvard School of Dental Medicine, before and since its organization, it seems advisable to re-define and clarify Harvard's position. Perhaps this can be done most effectively by explaining briefly how this undertaking will function and what its objectives are.

In September, 1941, we accepted our first class, which was limited to fifteen men. These students were admitted to the Harvard Medical School as well as to the new School of Dental Medicine. Entrance requirements were high, being in fact, identical with those governing admission to the Medical School. As far as I know the number of fifteen for the first class is not constant. It may be, however, that the requirements will automatically restrict the number of students, although educational records show that high standards do not necessarily affect enrolment.

Students in the School of Dental Medicine will be occupied for five calendar years in their course of training. The first two academic years, roughly from October to June, will be employed under conditions identical with those affecting medical students. At the end of the second academic year, dental students will spend approximately six weeks with fundamental studies related to dentistry. Dental and oral pathology, certain detailed studies in oral anatomy and physiology, dental records and dental histories are examples of the fields contemplated. During the third year, the student will again pursue activities identical with students in medicine only, from about October first until March fifteenth.

On that date the student enters the building devoted to dentistry, and spends his time there until August first, receiving pre-clinical instruction of several types. The division of subject matter during the fourth year is almost identical with that of the third. During the fifth year, the student is employed during the first month in completing his studies in pediatrics. The remainder of the year, ending with other conventional academic activities early in June, is occupied in the Dental School building with specific dental studies.

OBJECTIVES

More important than clock hour totals, presently to be mentioned, are the educational objectives of this combined course of instruction. There are, naturally, several objectives. First, it is planned to educate a dentist, the equal, at least, of any produced under current standards. This is one of the foundation stones upon which other developments may be built. The close relationship maintained between the training of medical and dental students indicates that the base upon which a special education in dentistry will be built should be considerably broadened. Studies in orthodontics, embracing the vast field of growth and development, and in oral and plastic surgery are designed, not only to acquaint the student thoroughly with the fundamentals of these dental specialties, but are also to be logically supplemented by varying periods of graduate training, not heretofore integrated with earlier work.

PROSPECTS FOR RESEARCH

Furthermore, and by no means the least important, are the new research opportunities, physically located at the Medical School and in several hospitals, where laboratory investigations may be carried on by qualified men, in close conjunction with clinical studies at the Dental School. Although the percentage of

students adopting research and teaching careers is not expected to be large, ample opportunities will be afforded for development within these essential but, up to now, too restricted fields.

During 1940, the Council on Dental Education issued a thoughtful and instructive pamphlet, entitled "Requirements for the Approval of a Dental School." This pamphlet, I am sure, was intended in the direction of educational unity, and was dedicated to the maintenance of highest standards. On page thirteen of this pamphlet, appears the following paragraph: "Subject to change in the light of future experience and with the profound hope of not appearing to be dogmatic, the Council prescribes a four-year dental course of not less than 3,800 clock hours and not more than 4,400 clock hours, distributed in such a way as to provide at least ten free hours each week, and announces that it will not be disposed to consider for approval a school which goes outside these limits in either direction."

TIME REQUIREMENTS

The Harvard School of Dental Medicine believes that the course of study, which has been arranged, is well within both accepted dental and medical limits. For example, to quote clock hours, the following general classifications are mentioned: The Harvard School of Dental Medicine offers the following approximate subject matter division:

1. Subjects in clinical medicine: 1800 hours.
2. Subjects basic to the practice of both medicine and dentistry: 1700 hours.
3. Special subjects in dentistry for which credit will be allowed toward a medical degree. (These subjects include certain studies in growth and development, in pathology, and in oral and plastic surgery.): 500 hours.
4. Subjects in clinical dentistry: 1900 hours.
5. Unassigned or free time: 700 hours.

Toward credit for a medical degree, including item 3 in the previous paragraph, the School of Dental Medicine offers 4,000 hours. (The present Harvard Medical School totals 4,010.) Toward credit for a D.M.D. degree, including item 3, in the previous paragraph, 4,100 hours are offered, well within the limits so wisely set by the Council on Dental Education. Thus it will be seen that the physical requirements of study for both degrees will be satisfactorily met, and by this union of two heretofore differing philosophies, an improvement of teaching, economy of time, and, in the last analysis, an economy of money have been effected.

An intense devotion to any cause not infrequently prompts positive, even heated statements. That this project has evoked so much comment, some of it rather violent, should be considered as an abiding evidence of the great love dentists have for dentistry. I know that there are fears of change, fears of submergence, fears relative to autonomy, fears about almost everything that appears precious to dentists and to dentistry. I believe that I can testify, and here I write personally and not for an institution called Harvard, that these fears are groundless, that independence of self-government has not and never will be threatened. As for autonomy in the development of scientific accomplishments, that has never existed, and never will. Furthermore, nothing could be more foolish than to fear that the clinical autonomy, won so well and with so much difficulty by generations of capable dentists, will ever vanish from the earth.

The Harvard School of Dental Medicine is founded upon a broad base. It is more than a union of medicine and dentistry; it is a reunion in fundamentals.

—*From Oral Hygiene, October, 1941.*



PRINCE EDWARD ISLAND



Editor — M. H. GARVIN, Winnipeg

SASKATCHEWAN



A S S O C I A T E E D I T O R S

D. T. Wye, Charlottetown

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

NOVA SCOTIA



S. G. Ritchie, Halifax

ALBERTA



John Clay, Calgary

NEW BRUNSWICK



Harry H. Peters, Saint John

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



J. S. Bricker, Vancouver

Canadian Dental Association and Canadian Dental Corps

It is to be hoped that commencing January 1, 1942, the Dental Boards of the Provinces of Canada will begin paying dues to the Canadian Dental Association on the basis of four dollars per member. Most of the provinces have accepted this plan and purpose putting it into effect as soon as all the provinces are agreed.

With this increased revenue the Canadian Dental Association will be able to appoint a full-time secretary and an assistant, select suitable headquarters, and commence a program which will be in the interests of the public as well as every dentist in our Dominion. Those appointed to carry out this program will undoubtedly count on definite financial backing and will make their plans accordingly. If after those plans are made, officers appointed, rentals and other obligations assumed, it is found that the expected revenue is not forthcoming because the various Boards are unwilling to pay dues for the dentists who have enlisted in the Canadian Dental Corps then our house will come tumbling around our heads.

If twenty-five per cent of our men enlist, and it exceeds that percentage in some provinces now, then our C.D.A. revenue would be cut by a quarter. If the war continues for some time and Canada draws a million men into her army, a possibility which has been officially stated, then our revenue would be cut fifty per cent as it would require half our dentists in order to bring the Dental Corps up to full strength. In the opinion of this writer it is neither right nor necessary, that our National Association should be handicapped in this way. This matter is of the utmost importance and is being drawn to the attention of our membership since certain provinces appear to be opposed to paying dues into the C.D.A. for members who have joined the Dental Corps.

Battles are not fought to capture some great city or some rich farm lands but to defeat the enemy in the field. The commander who does not concentrate his entire force on defeating the enemy in the field will be beaten by the leader who does. There is an analogy here for the Canadian dentists. We see how we can save the dues of those men who have enlisted and it looks attractive and yet by so doing we may, at least partially, destroy the C.D.A. organization which we have been trying to perfect for many years.

If these dues for enlisted men are paid it means that those still in private practice will have to pay one dollar and thirty-five cents a year extra on the basis of a twenty-five per cent enlistment. On the basis of a fifty per cent enlistment they would have to pay four dollars extra, a little less than ten cents a week. When one considers that these private practices have been increased very many dollars per week as the result of so many dentists going into the Corps surely it can work no hardship on anyone to pay this extra very small amount and so insure our National Association of sufficient funds to carry on efficiently. There are some things which just should be done and this is one of them.

BOOK REVIEWS

Oral Pathology. By Kurt H. Thoma, D.M.D., Professor of Oral Surgery, and Charles A. Brackett, Professor of Oral Pathology, Harvard University. 1306 pages; 1370 illustrations with 137 in colour. Cloth, \$18.00. St. Louis: The C. V. Mosby Company—1941. Canadian Agents: Mc-Ainsh & Co. Limited, Toronto.

As the author states in the preface, this text does not concentrate on dental pathology but deals with the pathology of the teeth, jaws and oral mucosa, and their relation to the body as a whole. Many oral manifestations are the result of systemic conditions. The profession of dentistry realizes that it must be familiar with the pathology of these tissues, so as to

recognize the manifestations in order to render to the patient the best possible health service. This fact has resulted in increased interest on the part of the average dentist in the study of pathology.

The text is divided into twelve parts, each containing several chapters dealing with a particular phase of the subject under discussion. The first part discusses experimental pathology, under the headings of hereditary, endocrine and nutritional influences in relation to the development of the teeth and jaws. Each of these influences is described and the author discusses at some length the result of endocrine and vitamin deficiencies.

In Part II, the author deals with develop-

mental anomalies of the teeth, such as hypoplasia, anodontia, premature loss, retarded eruption and supernumerary teeth, as well as anomalies in the form and structure of teeth.

The following section, which is composed of several chapters, deals with developmental anomalies of the head. These chapters are particularly interesting and it is seldom that a text of this nature discusses, at such length, the maldevelopment of the face and jaws and the malocclusion of the teeth. The investigations of Todd, Howard, Broadbent and many other prominent scientists in this field are often quoted and cuts show conditions under discussion.

In the fourth section of the text, the author describes functional changes of the teeth. This subject is covered very fully from injury by dentifrices to operative trauma. Periodontal diseases are dealt with in Part VII, and different chapters discuss periodontal atrophy, gingivitis, marginal periodontitis and periodontosis and its syndrome.

Other sections of the text deal with traumatic injuries, odontitis, in which dental caries is discussed at some length, odontogenic infection, diseases of the jaws, diseases of the oral mucosa, lips and tongue, tumours of the jaws and oral mucosa, and diseases of the salivary and mucous glands.

The text contains some material from previous books by the author, as well as much new information based on recent investigations. One may not agree with all conclusions but the text is a real contribution to dental literature. It contains a large number of illustrations, many coloured, and at the end of each chapter is appended a list of references as used in the particular chapter. As a work of reference, this book will make a valuable addition to the library of any dentist—S. A. M.

Dental Caries, Findings and Conclusions on its Causes and Control.

Compiled for the Research Commission of the American Dental Association by the Advisory Committee on Research in Dental Caries; Daniel F. Lynch, Chairman; Charles F. Kettering, Counsellor; William J. Gies, Secretary. Second edition 1941. May be obtained from the American Dental Association, 212 East Superior Street, Chicago, Illinois. Price \$2.00.

The first edition of "Dental Caries" met with such an enthusiastic reception in scientific circles that the Executive Board of the Research Commission has sponsored a second edition.

In addition to the original 195 summaries—revised or repeated—there are 42 others. The new contributors include research workers in Argentina, Australia, Bermuda, Canada, Denmark, England, Hongkong, India, Sweden, Switzerland and the United States. This second edition is a statement of 237 summaries by observers and investigators in twenty-six countries and, while it is not presented as the final solution to the problem of dental caries, it is hoped that some of the findings herein recorded will be of great benefit to the profession.

This book should be generally read when one considers that dental caries presents one of the major problems in the dental professional life of today.—M. H. G.

Juvenile Dentistry, by Walter C. McBride, D.D.S., F.A.C.D., Associate Professor of Operative Dentistry and Director of the Department of Pedodontics, School of Dentistry, University of Detroit. Special chapters by James Nuckolls, D.D.S., F.A.C.D., College of Dentistry, University of California; C. Taylor Hall, D.D.S., F.A.C.D., and Harold V. Dwyer, B.S., M.D., F.A.C.P., of College of Dentistry, University of Detroit. Third edition, thoroughly revised. 294 illustrations. Published by The Macmillans in Canada, St. Martin's House, Toronto. Price \$6.90.

The author of this book quotes Luther Burbank as saying, "If we had paid no more attention to our plants than we have to our children, we would now be living in a jungle of weeds." How true this is! Since too many dentists have not learned how to practise juvenile dentistry adequately or profitably this phase of practice has been sadly neglected.

Doctor McBride is especially well equipped for the task of educating the dentist for efficient service to his child patients and this book is simply a résumé of practical procedures employed over a period of ten years in a private practice devoted entirely to children.

The following subjects are discussed: Parents, Types of Children, Management of the Child, Assistant, Business Side of Juvenile Dentistry,

Building and Maintaining Practice, Remuneration, Growth of Dentition, Examination and Diagnosis, Prophylaxis, Operative Procedures, Pulp Management, Filling Materials, Extraction and Anaesthesia, Preventive Orthodontics, Teeth and the Dietary, Physical Diagnosis,

Morphology of the Deciduous Molars.

This book is interesting, well written and eminently practical throughout. It should assist in fitting the dentist to render a more adequate dental health service to his child patients.
—M. H. G.

DENTAL CORPS NEWS

Officers of a Dental Company who recently arrived in England.

TOP ROW, *Left to Right*: Capt. G. A. Brass, Yorkton, Sask.; Capt. J. H. C. Gowland, Kingston, Ont.; Capt. W. L. Finlay, Islington, Ont.; Lt.-Col. J. F. Edgcombe, Saint John, N.B.; Capt. J. G. Hamilton, Vancouver, B.C.; Capt. R. A. Connor, St. Thomas, Ont.; Capt. S. F. Greenberg, Winnipeg, Man.

SECOND ROW, *Left to Right*: Capt. R. L. Clayton, Riverside, Ont.; Capt. H. A. Banks, Coronation, Alta.; Capt. F. A. Smith, Vancouver, B.C.; Capt. L. H. Smith, Simcoe, Ont.; Capt. H. MacRostie, Edmonton, Alta.; Capt. G. E. Schragge, Winnipeg, Man.

BOTTOM ROW, *Left to Right*: Lieut. H. W. Hart, Vancouver, B.C.; Capt. G. H. M. Nicholson, Springhill, N.S.; Capt. J. M. Chamard, Montreal, P.Q.; Capt. W. G. Preston, Peterborough, Ont.; Capt. H. T. McLachan, Port Dover, Ont.; Capt. T. J. S. Cooke, Regina, Sask.; Capt. W. R. Stuart, Edmonton, Alta.; Capt. A. T. Roger, Billings Bridge (Ottawa, Ont.).





Officers and Other Ranks of a Draft of the Canadian Dental Corps who arrived safely Overseas recently.

FRONT ROW, *Left to Right*: Capt. A. Olman, Grande Prairie, Alta.; Capt. W. O. Laing, London, Ont.; Capt. R. E. McMahon, Lachine, P.Q.; Capt. G. A. MacBeth, Victoria, B.C.; Capt. R. C. Thompson, Montreal, P.Q.; Capt. O. Brewer, Winnipeg, Man.

SECOND ROW, *Left to Right*: Sgt. Connor, J., Greenwich, Conn., U.S.A.; Sgt. Mackie, J., East Kildonan, Man.; Sgt. Jones, B. T., Calgary, Alta.; Sgt. Dunn, L. J., Outremont, P.Q.; Pte. Waterman, W. H., Clive, Alta.; Sgt. MacDonald, P. A., Montague, P.E.I.; Sgt. Dilkes, J. L., London, Ont.; Sgt. Oxberry, T., Cornwall, Ont.

THIRD ROW, *Left to Right*: Pte. Blanchard, A. E., Prince George, B.C.; Pte. Fair, F. A., Guelph, Ont.; Sgt. Cranstoun, G. B., Vancouver, B.C.; Pte. Reid, C. W., Winnipeg, Man.; Pte. Christophe, C., Verdun, P.Q.; Pte. Moreau, P. H., Quebec, P.Q.

Four Montreal Dentists Given Promotions

Four Montreal dentists, now overseas with the Canadian Dental Corps, have received their promotions to the rank of major. They are Maj. E. T. Bourke, Maj. Victor Jekill, Maj. Gerald Franklin and Maj. J. P. Lantier.

Maj. Bourke was a member of the 9th Field Ambulance before the war and went over with that unit in December, 1939. He formerly lectured at McGill University, and is a past president of the Montreal Dental Club.

Maj. Jekill, a veteran of the Great War, was

formerly with the Canadian Dental Corps headquarters staff at Ottawa and was attached to No. 1 Neurological Hospital when it went overseas in June, 1940. He is a former staff consultant at Royal Victoria Hospital.

Maj. Franklin, a former member of the teaching staff at McGill, recently gave a series of lectures in Britain on facial injuries which received considerable favourable comment. He went overseas in December, 1939, with Canadian Dental Corps headquarters and was later attached to No. 1 Neurological Hospital.

Maj. Lantier also went overseas in December,

1939, but with the 1st Divisional Dental Company. He is a Great War veteran and a former director of clinical dentistry at the University of Montreal. He is also a past president of the Societe Dentaire de Montreal.—*Montreal Gazette*.

M.D. No. 10, Headquarters Winnipeg, Manitoba

Unofficial news from overseas is that two M. D. 10 officers, namely, Capt. C. L. Strachan and Capt. G. A. Buchanan, have been honoured

with promotions from Captain to Major.

New operators joining this Company lately are Capt. J. E. Thompson, of Schreiber, Ontario; Capt. R. W. Fell, of Winnipeg; and Lieut. S. W. Sarbit, of Selkirk, Manitoba. Capt. Thompson and Capt. Fell saw service overseas in the last war. Four other dentists who volunteered for service recently, were rejected as medically unfit.

Miss Dorothy Fulton, chair assistant, and Miss Mary Swan, stenographer, are recent welcome additions to the staff.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA:

Vancouver Dental Society

The opening meeting of the 1941-42 session of the Vancouver Dental Society showed the care and effort of the new officers to give something new as well as of practical importance to the members. Dr. Jack Dawson, President, opened the meeting. The reports of the different study clubs were given and then the guest of the evening Blythe Eagles, Ph.D., Department of Dairying, University of British Columbia, was introduced. Dr. Eagles was well received and his fine presentation of "The Vitamin B Complex" was a revelation to all. Dr. Eagles very graciously made a synopsis of his address as follows:

The Vitamin B Complex

by BLYTHE EAGLES, Ph.D.

Department of Dairying,
The University of British Columbia

The advance that has been made during the past two decades in the field of nutrition marks an epoch in man's progress. During that short space the seeking and searching of men the world over have led, little by little, to the unveiling of the mystery of the vitamins; to their isolation as pure substances; to the discovery of their nature and exact composition; to their synthesis; and to the gradual clarification of our understanding of "how they work". Today fifteen vitamins have been chemically identified and at least another fifteen less well-defined factors have been postulated.

The antiberiberi vitamin—vitamin B—was first shown to be of a multiple nature in 1919 when it was demonstrated that the antiberiberi factor in yeast was more readily destroyed by

heat than was its growth-promoting quality. Today the multiple nature of the vitamin B complex has been fully established and ten distinct vitamins have now emerged as components of the original water soluble B fraction. In addition, evidence has been adduced for the existence of at least five other B-complex factors.

Structurally the ten members of the vitamin B complex have been shown to constitute an utterly diverse category of substances which have nothing in common except a physiological definition—that they are specific organic substances occurring in foodstuffs in small quantities and essential to the life of animals. Some are many times more potent than others, yet all are equally indispensable for normal functions, and are in no place interchangeable in physiological utility.

The story of their isolation, the subsequent proof of their chemical structure and their ultimate synthesis in the laboratory ranks as one of the greatest achievements of modern science.

A brief description of the ten known B vitamins is given herewith:

Thiamin—Vitamin B₁—Specific for prevention and cure of beriberi. Experimental thiamin deficiency in the human has been shown to result in fatigue, constipation, loss of weight, peripheral neuritis and other symptoms. Thiamin is an essential factor for the enzymic oxidation of carbohydrate. Human requirement—1.5 to 2.0 mgms. per day.

Riboflavin — Vitamin B₂ — Essential for growth. Uncomplicated ariboflavinosis recently shown to result in interstitial keratitis in

humans. Important factor in hatchability of hen's eggs. Forms part of an essential enzymic system concerned with the transfer of oxygen. Human requirement—1.5 mgms. per day.

Nicotinic Acid—Specific for uncomplicated pellagra in humans and black-tongue in dogs. Essential for the synthesis of coenzymes I and II. Human requirement—15 to 25 mgms. per day.

Pyridoxin—Vitamin B₆—Rat dermatitis factor. Essential for growth and prevention of cheilosis.

Pantothenic Acid—Filtrate and chick dermatitis factor. Essential for growth and normal functioning of adrenal gland.

Inositol—anti-baldness factor in mice.

p-amino benzoic acid—anti-gray hair vitamin in rats, dogs, guinea pigs and silver foxes.

Choline—Essential for growth. Lipotropic activity. Prevents haemorrhagic degeneration of the kidneys. Concerned with methylation process in animal body.

Biotin—Vitamin H—Coenzyme R—Anti-egg-white injury factor. Essential for chicks and Rhizobia. Little known as yet of its role in human nutrition.

Glycuronic Acid—Essential for growth in chicks.

The discovery of these subtle organic factors has demonstrated that nutritional needs are in reality very complex. However, our knowledge of vitamins now is sufficient to establish nutrition for the first time on a really scientific basis. We know how to prevent and cure serious deficiency diseases by the use of vitamins. The next great advance will be the providing of enough vitamins to prevent chronic ill health. If enough of these are provided from natural sources, all the other elements necessary to a good diet will be provided automatically.

ALBERTA:

Medical-Dental Meeting

Recently Doctor Carl Waldron, of Minneapolis, addressed a combined meeting of the Calgary Medical and Dental Societies at the Holy Cross Hospital. His subject was "Fractures of the Jaws and Their Treatment".

Close medical - dental co - operation was

stressed as a necessity in all cases. Methods of treatment for a wide variety of fractures of both jaws were outlined and illustrated. Doctor Waldron made an important suggestion in dealing with fracture of the neck of the condyle. He pointed out that frequently a permanent disfigurement occurred. In spite of accurate fixation, the result was that as the mouth opened, the chin would move from centre toward the fractured side. The wider the opening the further the lateral thrust. The writer has been embarrassed by this unfortunate result.

In this type of fracture Doctor Waldron usually finds wiring of the teeth a very satisfactory method of immobilization. To avoid the above mentioned defective result he cuts a disc from an old inner tube, large enough to cover the occlusal surface of the first molar. The disc is held over this surface of the first molar on the fractured side by means of fine wire. When the splint is closed there is contact on the uninjured side but a definite lack of occlusion is gradually noticeable from the occluding molar on the uninjured side till there is the full space of the thickness of the disc between the first molars on the other.

According to the speaker this defect has not been observed in any of a considerable number of cases since the above method has been followed.

The writer has just finished a case of fracture of the neck of the condyle which was wired the day after Doctor Waldron's visit. Following his advice the disc was left in place in the case of a ten year old girl for eleven days, and the teeth were then wired in closer occlusion. After comparison of two weights of inner tubes a disc was made from the thinner one. There is no abnormal movement of the jaw, the case being now completed.

Another point of importance was the distinction between a considerable subluxation of the temporo-mandibular joint and its dislocation. This differentiation may be of extreme importance in deciding treatment following fracture. It was pointed out that when the bulk of the condyle is still distal to the highest point of the eminencia articularis the change of position is a subluxation and not a dislocation.

The thanks of both Societies was tendered to Doctor Waldron for his kindness in presenting his authoritative address on this subject.

SASKATCHEWAN:

Dr. H. S. Thomson Visits Saskatchewan

Dr. Harry S. Thomson, Field Secretary of the Canadian Dental Hygiene Council, gave talks to the students of the Saskatchewan Normal Schools at Regina, Saskatoon and Moose Jaw during the week of November 17-22, under the auspices of the Provincial Departments of Education and Health. Invariably these talks have been greatly appreciated, and are certain to be of great educational value to the teacher and through her to a large circle.

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Regina Dental Society

The Regina Dental Society had a very interesting and instructive address and clinic given by Dr. Allan Blair, of the Provincial Cancer Clinic, at its meeting on November 10. Dr. Blair brought several patients with oral malignant lesions, to the meeting, which made his clinic of great practical value.

■
Moose Jaw Dental Society

The Moose Jaw Dental Society held its November meeting in the Grant Hall Hotel on the 13th with a very fine attendance, the new President being in the chair. Many important questions related to the dentist were discussed and two resolutions were to be forwarded to the Provincial Dental Council and to the Regina and Saskatoon Societies. Dr. Fraser Muirhead was appointed to give the lectures this season, on Oral Hygiene, to the nurses in training of the two local hospitals.

MANITOBA:

Child Health Services in Winnipeg

Recently the City Health Department of Winnipeg has undertaken a reorganization of services following the amalgamation of the Medical, Dental and Nursing Services of the City School Board with similar services in the City Health Department.

Heretofore the City had a Division of Infant Welfare, providing medical and nursing supervision for the new-born babies and infants, and the School Board provided a medical, dental and nursing supervision of children in the public schools.

The most important group of children, namely those 2-5 years of age inclusive, were

neglected almost entirely along with the children in parochial schools, kindergartens and orphanages. The City Health Department is rapidly arranging to extend its operations to take in the health supervision of all children requiring these services.

A Child Health Board under the chairmanship of Dr. F. E. Warriner, school trustee and former mayor, acts in a consultative and advisory capacity to the Health Department. This Board is made up of representatives from the Public School Board, the medical and dental professions, and the Health Department, and it is an intensively active body.

The medical staff is made up of leading children's specialists who serve part-time. The dental staff is composed similarly, but under a full-time well-qualified chief dental officer. In addition there are a psychiatrist and an oculist, and of course a fine group of nurses. The aim is to secure adequate service to meet the needs.

The Dental Service is that of inspection of large numbers of children, which is fine as far as it goes, but it is certainly far from adequate, especially now that additional institutions are being taken over. Also there is a fine treatment service which, apart from emergency work, may have to be curtailed in favour of the former function, although arrangements now under consideration may permit the extension of this dental service to the needy.

The closest co-operation with the Dental, Nursing and Medical Services is being developed, and there can be no doubt that when the adequate service is in full operation, the improvement in the health and physique of the new generation will be obvious.

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**Winnipeg Dental Society,
November Meeting**

A larger number than usual of the members of the Winnipeg Dental Society, with the President, Dr. E. J. Robb in the chair, turned out to listen to Dr. J. D. Adamson, Professor of Medicine at Manitoba Medical College, discuss some of the "New Drugs in Medicine".

The new drugs were those of the "Sulpha" group. Dr. Adamson said that the introduction of the sulpha drugs into the practice of medicine was the most important innovation in its history. Pneumonia was no longer the

most dreaded disease because sulphanilamide seemed a specific. No uncomplicated case of pneumonia, treated with this specific, need die.

The effectiveness of the sulpha drugs in the treatment of alveolar foci of infection has not yet been demonstrated.

Manitoba Dental Association

A steadily growing number of our Association are answering the call to "duty". At this date 21.5% have "joined up". Another 10% volunteered but were found to be physically unfit.

Dr. W. Howard Geddes, registered in Manitoba since 1909, a willing worker for the betterment of dentistry and a past president of the Winnipeg Dental Society, has left to reside in British Columbia.

Dr. F. R. King, formerly of Winnipeg and more recently of Dauphin, is now believed to be practising in Boston, Mass. If there are any more changes of address contemplated the Registrar of your Association would appreciate being notified and not left to find it out accidentally months after the change has taken place.

Dental Assistants Hold Tea

Miss Jean Gordon, President of the Winnipeg Dental Nurses' and Assistants' Association, together with Mrs. R. F. McWilliams and Mrs. E. Roy Bier, received at the pretty Victory Tea held at Mrs. Bier's home on September 20. Red, white and blue flowers with matching tapers decorated the table attractively.

Presiding at the tea table were Mrs. W. W. Wright, Mrs. K. M. Johnson, Mrs. E. J. Robb, Mrs. F. G. Ritchie, Mrs. A. B. Shearer, Mrs. J. Abra, Mrs. A. Sime and Miss L. Veal. Assisting were Miss M. Bier and the members of the Winnipeg Dental Nurses' and Assistants' Association.

The Winnipeg Dental Nurses' and Assistants' Association met on November 3, in the Green Room of the St. Regis Hotel. The president, Miss Jean Gordon, was in the chair. An enjoyable hour was spent listening to Capt. J. M. Grahame, guest speaker of the evening. Donations were received from the girls—the money to be used to put up Christmas boxes for some of the soldiers at Tuxedo Hospital.

ONTARIO:

Eastern Ontario Dental Association Meets at Ottawa

The sixty-fourth annual convention of the Eastern Ontario Dental Association held in the Chateau Laurier Hotel, Ottawa, will be remembered for its fine programme and good fellowship. The congenial Dr. Roy McDougall of Ottawa presided at the meeting in his own inimitable style and the spirit of friendliness and hospitality was everywhere in evidence to those in attendance from out of town.

Arrangements for the meeting were in perfect order due in a large measure to the quiet, untiring efforts of secretary, Dr. Art. Morrow. 84 members were registered and guests were present from Montreal and Toronto.

The guest essayists of the meeting were Dr. John Bothwell, Dr. Charles McLean and Dr. G. V. Morton of Toronto, Col. Frank M. Lott, Officer Directing the Canadian Dental Corps and Dr. F. A. French of Ottawa. All speakers presented practical, well considered discussions and their efforts were well received and much appreciated.

A public health meeting was arranged for the first evening of the convention. Dr. T. R. Marshall, chairman of the Public Dental Health Committee of the Ontario Dental Association and Dr. E. T. Guest, past chairman of the same committee, addressed the meeting. Following the addresses a sound and colour motion picture entitled, "Billy's Trip To Healthland", was shown. Through the efforts of Dr. W. C. McCartney, acting on behalf of the Ottawa Dental Society, Dr. Guest and Dr. Marshall each addressed two assemblies of over 1000 secondary school students. In addition, the Ontario Dental Association Committee set up a public dental health display in the Exhibit Hall.

Among the pleasing features of the convention was a luncheon on the first day when ladies were invited as guests and Major Ira W. Hamilton gave a most interesting and clever address. He was highly commended, not only for his free and easy style of speaking but particularly because of the message itself which was really thrilling to all his hearers. Another pleasing feature was the hospitality of the Ottawa ladies to the ladies from out of town. They were entertained at tea on the first day

of the convention and at luncheon on the second day and these functions were finally climaxed when Mrs. Bradley entertained at dinner as the convention broke up.

In the Exhibit Hall displays were arranged by Allen and Rollaston, Antidolor Manufacturing and Cook Laboratories, Ash-Temple Co., Ltd., Denco of Canada, Dental Products Company, Dominion Dental Co., Lavis Chemical, Novocol Chemical Manufacturing Company and Coca-Cola. In the assembly room a complete unit of the Canadian Dental Corps was set up including an officer's unit, dark room and X-Ray and technician's unit.

NEW OFFICERS OF THE O.E.D.A.

President—Dr. W. L. Durant of Brockville.
Vice-President—Dr. A. R. Morrow, Ottawa.
Sec'y. Treas.—Dr. D. L. McKerracher, Pembroke. *Committee*—Drs. D. A. R. McDougall, A. A. Cameron, Jas. Copeland, Aimé Couture, all of Ottawa, C. M. Purcell, Pembroke, W. Stevenson, Avonmore, E. J. Walroth, Carlton Place and E. B. Sparks, Kingston.

Graduation of the Class of 4T2 at the Faculty of Dentistry U. of T.

Recently the Dental Faculties of all Canadian Dental Universities were requested by the Canadian Dental Corps authorities to give the matter of early graduation of the senior students their consideration. This request was based on the need of graduates for both the Canadian Dental Corps requirements and civilian practice.

The Board of Directors of the Royal College of Dental Surgeons was also asked to co-operate in this matter by the military authorities and considered the proposals of the Faculty of Dentistry at their recent meeting.

The Senate of the U. of T. has adopted the report of the Faculty of Dentistry of that University pertaining to early graduation and release of the class of 4T2.

The Examinations will be held during the course of the last week of March, 1942—with the release of the examination results as soon as possible thereafter. It is expected that these men will be available for their respective fields by April 1, 1942.

London, Hamilton and Toronto Societies Hear Dr. Walter Wright of Pittsburgh

During the week ending November 15 Dr. Walter Wright, of the University of Pittsburgh,

presented a discussion of acrylic resins before many Ontario dentists. He proved himself a master of his subject, being familiar with the detailed developments of this much used and popular material from its early discovery. The meetings in London, Hamilton and Toronto were very well attended.

Convictions for Illegal Practice

Walter Ashton, Fonthill, Ontario, was convicted in Magistrate's court at Welland on September 24, 1941 and fined \$100 or 30 days. This case is being appealed.

R. H. Reid, alias Victor Reid, alias Victor White, alias Victor Walker, was convicted on October 21, 1941, in York County court and fined \$500. This was his 6th conviction.

Ottawa Lions Club

Dr. Harry S. Thomson, Field Secretary of the Canadian Dental Hygiene Council, was the guest speaker at the Ottawa Lions Club on October 28.

Dental Nurses' Alumnae Association

The annual Mother and Daughter banquet was held on November 11, at Diana Sweets, Bloor St., Toronto. The guests were welcomed by the President, Miss Anna Lindsay.

Dr. Roscoe Graham, a distinguished surgeon, gave a description of his trip through Norway and also Virginia, illustrated by coloured motion pictures and slides. The speaker was introduced by Miss Ruth Grimmon and thanked by Miss Betty Broadrib.

Miss Jeanne Alison, A.T.C.M., a member of the Alumnae, gave a group of two piano selections.

It was announced that the annual dance is being held at the Royal York Hotel on November 28.

The chorus of "O, Canada" and "There'll Always Be An England" were sung at the close of the meeting.

At a meeting in October, Miss Gertrude Whitehead was presented with a certificate of honorary membership in the Alumnae in recognition of her untiring services. The president, Miss Anna Lindsay, made the presentation.

MARIAN JENNINGS,
Assistant Corresponding Secretary.

Toronto Ladies' Auxiliary

In order to raise money for war work this group has organized a campaign to collect gold scrap from dental offices in the city. Every office is supplied with a box of envelopes in which to place small pieces of scrap such as a discarded inlay, a worn out crown, etc., and in three weeks ending November 15, eighty-six envelopes were turned in from forty dentists which netted \$144.90.

Ontario Dental Nurses' and Assistants' Association

BRANTFORD DISTRICT CHAPTER: Olive Keen, Vice-president, entertained the members of the Brantford District Chapter at a Hallowe'en Party on the evening of October 30. Alta Simon presided during the business session.

On Wednesday afternoon, November 5, the members held a quilting party at the home of Elsie Verner. A second quilt was completed for the local Red Cross Society.

MARION GREENSIDES, *Secretary*.

ESSEX AND KENT COUNTY CHAPTER: The regular monthly meeting of the Essex and Kent County Dental Assistants' Association was held on November 3, in the Canada Building. Janet Hamel presided.

The resignation of the Recording Secretary, Trudy Hohner Smith, whose employer, Dr. Murray Campbell, of Chatham, has reported for active service with the Canadian Dental Corps, was read and accepted. Dorothy Scott, of Windsor, will assume the office of Recording Secretary for the remainder of the year.

Dr. A. L. Meredith, President of the Essex County Dental Association, addressed the meeting on the subject of "What a Dentist Expects of His Assistant". Dorothy Scott expressed the appreciation of the members to Dr. Meredith.

WINIFRED GRIER, *Secretary*.

HAMILTON CHAPTER: The Hamilton Chapter of the Ontario Dental Nurses' and Assistants' Association held a dinner meeting at the Wentworth Arms Hotel, on November 12.

The members were privileged to have as their guest speaker, Dr. Charles McLean, of Toronto. The subject of Dr. McLean's address was "Case Analysis, Case Presentation,

and The Handling of Patients".

The President, Margaret Thomson, was in the chair.

GERTRUDE KIDNER, *Secretary*.

LONDON DISTRICT CHAPTER: The London dental nurses and assistants were the guests of the London Dental Association at a dinner meeting at the Hotel London on October 25. Dean A. D. A. Mason, of the Faculty of Dentistry, University of Toronto, was the guest speaker.

On November 3, the members met in the office of Dr. R. H. Galbraith. Plans were made for a rummage sale. The proceeds will be given to the Red Cross Society.

Miss Steele, a member of the staff of the Victorian Order of Nurses, was the speaker at this meeting. Dorothy Innes presided and Isobel Burns was hostess.

RUTH WALKER, *Secretary*.

SARNIA DISTRICT CHAPTER: Early in November the Sarnia dental nurses and assistants met in the office of Doctors J. K. and J. M. Garrett. The President, Vera Dyer, was in charge of the meeting. Marjorie Crees was named membership convener.

The guest speaker, Dr. J. M. Garrett, chose as the subject of his interesting address, "The Use of Drugs in the Dental Office".

Aileen Ridealgh, who for the past several years has been an active member of the Sarnia District Chapter of the Ontario Dental Nurses' and Assistants' Association, recently reported for duty at Military District Headquarters, Number One, London. Miss Ridealgh has received two certificates from St. John's Ambulance Corps and has taken a course in stretcher bearing and drill, as well as infantry drill. The members of the O.D.N. & A.A. express their united pride in Miss Ridealgh and wish her Godspeed in the service of her country.

HELEN WYNNE, *Secretary*.

TORONTO CHAPTER: The members of the Toronto Chapter met on October 6, at the Royal York Hotel. The President, Irean Checkley, was in the chair and introduced the guest speaker, Dr. Charles McLean. The subject of Dr. McLean's splendid address was "Patient Education" and his talk was illustrated with models.

October 6 also marked the second birthday of the Patriotic Donators and Knitters Club which is supported by Toronto dental nurses and assistants and friends. A marvellous display of the tenth consignment of knitted comforts was exhibited at this meeting by the War Convener, Mrs. Leta Birkmyre Blaber. Mrs. Blaber also gave a complete report of the activities of the P.D. & K.C. since its organization two years ago.

The dental nurses and assistants of Toronto met at the Royal York Hotel on November 3. The President, Irean Checkley, was in the chair.

A most helpful paper entitled "Parliamentary Law and Procedure" was given by Mrs. Marion Edwards.

Dr. John A. Bothwell, a member of the Executive Committee of the Ontario Dental Association, spoke to the members on the subject, "Personnel and Personality of the Dental Office". Dr. Bothwell is an outstanding essayist and his address was of genuine value to the many nurses and assistants who were present at this meeting.

KATHLEEN SIMPSON, *Secretary*.

The Provincial President, Tomye Turner, of Toronto, represented the Ontario Dental Nurses' and Assistants' Association at the seventeenth annual meeting of the American Dental Assistants' Association in Houston, Texas, October 25 to 31, 1941. Mrs. Turner presented a paper entitled, "Why Do You Enjoy Dental Assisting?", and expressed the greetings and good wishes of the members of the O.D.N. & A.A.

The newly elected officers of the American Association are as follows: President: Mildred Stevenson, 1246 Washington, Lincoln, Nebraska. 1st Vice-president: Dorothy Lickiss, 1004 Franklin Bldg., Oakland, Calif. 2nd Vice-president: Verena Strassburg, 1147 Main St., Watertown, Wisconsin. 3rd Vice-president: Emma Luke, 2605 Prairie Ave., Evanston, Illinois. Secretary: Aileen M. Ferguson, 709 Centre Street, Jamaica Plain, Mass. Treasurer: Margaret C. Sharp, Peoples Trust Bldg., Jasonville, Indiana.

FERNA LEECH COOK,
Publicity Convener.

QUEBEC:

Dr. Walsh Returns

Dean Arthur L. Walsh, of McGill University, has just returned by air from the annual meeting of the American College of Dentists at Houston, Texas, at which meeting he presided. The meeting was held on October 26, one day ahead of the American Dental Association Convention where some five thousand members were registered and according to accounts was a huge success.

Illegal Practice

On October 9 Bernard Fournier was fined \$300 and costs, with the alternative of spending three months in jail, for the illegal practice of dentistry. The Court was informed that this was Fournier's fifth offence.—*Montreal Star*.

Georges Gervais was sentenced to a fine of \$250 and costs or four months in jail for illegal dental practice.—*Montreal Gazette*.

EMPIRE NEWS

GREAT BRITAIN:

State Medicine

Tentative plans for a state salaried medical service have been prepared by a commission set up by the British Medical association. An alternative, less far-reaching scheme has been drafted in case the first plan is rejected.

The state service plan would abolish private practice. All doctors would be on salary and would work in groups from 10 to 30 at local government health centres. Centres would have a modern pathological laboratory, x-ray

plant, consulting and examination rooms. Patients would be treated in centres or at home.—*London, Nov. 1, per Toronto Daily Star*.

AUSTRALIA:

New Dental School and Hospital for Melbourne

The Government of Victoria has decided to make funds available immediately for the erection of a modern School and Hospital on the site which was reserved by the present Government a year or two ago.

It is very gratifying to the profession to know that, despite all other claims made to the Government, the necessity for the provision of adequate facilities for the training of dentists and for the provision of dental treatment for the poorer people of the community has been so fully realized.

Without question the erection of a modern building, with modern equipment, will stimulate a greater interest in the profession of dentistry as a career, and will permit the crying need for dental service by the poor of our city to be met to a greater degree than has been possible in the past.

A building such as contemplated in such a prominent position will be a constant reminder to the community that the profession of dentistry is ever advancing and must impress upon the public mind the importance of dental treatment in relation to general health.

The Melbourne Dental Hospital's object is to provide:

- (1) Education and treatment of expectant mothers in the pre-natal clinic.
- (2) Preventive and curative treatment for young children in the pre-school clinic.
- (3) Education for parents and children attending the hospital.
- (4) Operative treatment for diseases of the teeth.
- (5) Operative and medicinal treatment for diseases of the gums (pyorrhoëa, etc.).
- (6) Facilities for general and local anaesthetics under the direction of expert anaesthetists for extractions or minor operations.
- (7) Surgical treatment in the Oral Surgery department for all types of operations about the jaws, face, neck and lips, and jaw fractures.
- (8) Artificial dentures for the partially or completely edentulous patients.
- (9) Facilities for advanced treatment of special or rare conditions not usually capable of treatment in the surgeries of private practitioners.
- (10) Clinical material for the education of the students of the Dental School of the University of Melbourne.

A large proportion of the patients presenting at the hospital are treated free of any monetary

consideration. In each case, whether or not a contribution is to be made towards the upkeep of the Hospital, an investigation is made by a special assessing officer as to the suitability of the patient for hospital treatment. The services of the hospital are not only available for the indigent of the population, but for the intermediate classes of the community who require special treatment which their finances will not permit them to obtain from private practitioners, and almost invariably such patients are accepted under the personal recommendation of a practitioner.—*Editorial in Australian Journal of Dentistry, Sept., 1941.*

NEW ZEALAND:

The War and Dentistry

(Excerpt from Editorial in N.Z. Dental Journal, July, 1941.)

If the war lasts another two years or even less, then a grave situation is likely to arise, affecting not only the health needs of the Army, but also those of the civilian population of New Zealand. Indeed, so far as dentistry is concerned, the position is already far from reassuring, not to say alarming, for with a gradual falling off in dental students in recent years and the decision to call up second year students for military service, the number entering their third year in 1942 will be reduced almost to an vanishing point. This means that the activities of the Otago University Dental School, which is also a National School, must, of necessity, be drastically curtailed both from an educational point of view, and from the point of view of the valuable service it has long been rendering to the poorer section of the community. Rather a 50 per cent increase in the output of the School is indicated for Public Health reasons alone. Consequently, it was only natural that the Dean of the Dental Faculty should stress these facts when asking that dental students who had completed their first year should not be called up for military service. Unfortunately, however, this request, although it had the approval of the Dental Sub-Committee of the National Medical Committee, was rejected by the latter body for reasons which certainly appear somewhat arbitrary and lacking in sympathy and understanding of the actual situation with which dentistry is faced at the moment.

SOUTH AFRICA:

Diploma in Public Dentistry

The University of the Witwaterstrand, Johannesburg, has decided to provide courses leading to the Diploma in Public Dentistry.

The courses leading to the examination of Part I commenced last August and seven candidates took them.

The curriculum for the Diploma extends over twelve calendar months. Every candidate must produce evidence of having received, within the University, instruction in the Principles of Preventive Medicine (40 hours) and the Principles of Preventive Dentistry (40 hours).

During a period of not less than five months candidates must have been engaged in acquiring a practical knowledge of the duties, routine and details of Public Health Administration, under the supervision of an approved Health Officer.

Every candidate for the Diploma is also required to have received at the University post-graduate instruction in Orthodontia (extending over twelve months) and Dental Histology and Pathology (extending over five months).

The subjects of the examination for Part I of the Diploma are Preventive Medicine, Preventive Dentistry, Orthodontia, Dental Histology and Pathology.

In addition to the subject Orthodontia the Part II examination includes the subjects Bacteriology, Parasitology, Radiology and Dietetics.

It is unlikely that there will be sufficient candidates to warrant courses being given every year, but, provided there are at least four candidates, the University authorities will at all times be agreeable to make the necessary arrangements. — *D. Mag. and Oral Topics*, September, 1941.

GENERAL NEWS

Highlights of A.D.A. 83rd Annual Meeting Houston, Texas—October 27-31, 1941

An exchange of greetings between President Roosevelt and Dr. Wilfred H. Robinson, president of the American Dental Association, started off the 83rd annual meeting of the Association at Houston, and set the pace for one of the most successful professional gatherings in many years.

The registration was 8,256 and all eight scientific section meetings were well attended with the scientific and health exhibits in Sam Houston Coliseum drawing many hundreds of lay persons throughout the meeting.

Doctor Robinson's opening address pledged the resources of dentistry to the national defence effort but he also pointed out the necessity of working toward "the time when the dental health of the people will be at new high levels" and stressed the need of attacking dental disease on a national scale, "with every individual and every community and state assuming its proper responsibility."

In assuming the presidency at the close of the convention, Dr. Oren A. Oliver of Nashville, Tenn., stressed the "problems created by national defence and selective service" and then

urged that the profession begin immediately to plan for the problems "which are bound to come with the advent of peace." He recalled the industrial and social dislocations which followed the last war and warned of the need for anticipating similar problems to come.

Dr. J. Ben Robinson, dean of the Baltimore (Md.) College of Dental Surgery, was elected president-elect at the final session of the House of Delegates. Boston was selected as the convention city for 1942.

Lieut. Com. C. Raymond Wells, chief dental officer of the Selective Service System, brought from Washington the official word that the course taken by the American Dental Association with regard to the role the dentist should play in rehabilitating men rejected for service because of dental defects, had won the complete approval of the government.

An urgent call to Washington prevented Dr. Morris Fishbein, editor of the Journal of the American Medical Association, from making his scheduled address at the Tuesday morning general session. Doctor Robinson's opening address was the highlight of the session. At the close, a motion picture, "About Faces", dedicated to the "dental health of the

children of America" had its first showing. Its production, at a cost of \$10,000, was financed by Mr. Cator Woolford, business man and philanthropist of Sterling, Ga. Dr. J. G. Williams of Atlanta, Ga., director of the division of dental health education of the Georgia Department of Public Health, who acted as Mr. Woolford's representative in the making of the film, prefaced its showing with thanks to the donor, who was present. Mr. Woolford was awarded a silver plaque by the Georgia Dental Association. Duplicate prints of the film may be obtained from the Bureau of Public Relations of the American Dental Association.

Tuesday was Pan American Day—the first observance of its kind by the American Dental Association. Dental organizations of 18 republics of the western hemisphere, through prominent representatives, participated.

The final general session brought to the convention two outstanding figures in British Dentistry: Dr. A. E. Rowlett of Leicester, official representative of the British Dental Association, and Sir Harold Gillies of London, noted facial surgeon. Doctor Rowlett is past president of the B.D.A. and is treasurer and a past-president of the International Dental Federation.

Judging from the many complimentary remarks overheard at the Coliseum, this year's scientific and health exhibits were tops. Although fewer in number than at some previous meetings, their quality was higher. The hospitality, co-operation and help furnished by the local exhibit committee was thoroughly appreciated by the exhibitors.

Twenty-two outstanding motion pictures were shown in the Visual Education program all day Monday, Tuesday morning, Thursday afternoon and all day Friday.

The Public Relations Committee performed an excellent piece of work. Nine radio broadcasts, eleven school lectures and three luncheon club lectures were given during the meeting. Over twenty dental window displays were exhibited in the windows of the most prominent stores. Drug and grocery stores and restaurants displayed charts and posters. The dairy companies distributed attractive leaflets inviting householders to visit the scientific and health exhibits. For the first time in the Associa-

tion's history, a Teachers' Institute was held. Over 1,800 Houston educators attended the program which was devoted exclusively to children's dentistry.

The Publicity Committee likewise did an outstanding job. "Never before" said the Houston editors, "have we covered a convention that was so well handled from a publicity standpoint. Frankly, we were worried because of the highly technical nature of your papers which we had neither the time nor the ability to decipher. It was a load off our mind to find that our work had been done for us." Naturally, this resulted in 100 per cent co-operation on the part of the Houston papers as evidenced by the very fine space allocated to the Association's affairs.

At 3 p.m. on Thursday, the entire nation heard about "A New Century of Dental Progress" in a round-table discussion broadcast over the blue network of the National Broadcasting Company. Those who participated were Dr. Wilfred H. Robinson, Dr. Oliver and Dr. Rowlett.

From every angle and from every viewpoint, the Houston Local Arrangements Committee did a top-notch job. They left no stone unturned or deed undone to demonstrate southern hospitality and Texas efficiency.—*Bureau of Public Relations, American Dental Association.*

News From Tobruk

(Condensed from a letter written by a member of the Australian Dental Unit from Tobruk to a friend at home.)

We had a good trip over, calling at Colombo. Major Amies worked solidly on board doing surgical work in a tiny barber's saloon with a temperature and humidity that would have made a stoker shudder. Once the crew got wind of a dentist of repute on board they came along in droves, taking full advantage of the windfall. We landed in Egypt, and the whole unit went into camp near Alexandria. The dental unit commenced work with a vengeance under primitive conditions. We had to walk a quarter of a mile for water and carry it in kerosene tins; and sand, and sand-storms, don't add much to the attractiveness of work in the desert. The Major used a captured Italian dental caravan fitted out as a surgery, but it was rather small, although it did serve its purpose. We were here about

a month, then were moved to a forward area. After leaving Alexandria we ran into a terrific storm. Having a few romantic ideas about seas crashing over a ship, flying spray and biting winds, I have come to the conclusion that Conrad and Masefield write a lot of "hoovey"—it is all right reading these things in books—it is "adventure"—but in actual practice it is most uncomfortable, irritating, and anything but exciting. I am not prejudiced—that is everyone's opinion. We more or less died for three days, and then on the fourth day we were wrecked—or probably it mightn't sound so dramatic if I simply said we ran aground. We all got ashore safely, and after a meal from stores floated ashore we faced a march across the desert. This turned out to be a 14-mile trek. Later we went back to the boat, which was given up as a total wreck, and salvaged practically all the gear. All the dental equipment you went to such trouble to get for us was rescued intact, with the only trouble being a little rust on some of the things from contact with salt air and spray. We had trouble getting transport, and had two or three weeks stranded in the desert, at two different places experiencing some nasty sand-storms. Finally we moved right through to our destination—some 600 or 700 miles in advance of any other hospital. We had just settled down for some ten days when the Jerry push started. We finally had to get out in a hurry, losing some 70 tons of equipment, but again the dental gear came through safely.

We arrived back at that area which was besieged by the Germans, and have been here almost three months, with continual air raids, which make living rather hazardous, and proved to be a good testing ground for any philosophies one may have concerning life. Jerry still has us hemmed in, but I think we have his measure now. We have been doing dental work here—work with a vengeance. The English troops have no dentists in this part of the world, so we collect the lot. When the Major arrives there might be anything from 30 to 40 men awaiting treatment. Australians, Tommies (mostly), Libyians, Palestinians, Sikhs and all manner of Indian troops. There have been a number of faciomaxillae cases in, but we are acting as a casualty clearing station rather than a hospital, and so have not the opportunity of doing any specialized work. At

any rate, it would be impossible now should conditions be favourable, for we forwarded the special gear back to base in those hectic days when Jerry looked as though he would push us into the sea, for it would be impossible to replace such gear should it fall into the enemy's hands—so the gear appears to be left to its own devices till we get back to base, and into some centre where it will be possible for such work to be done under more or less favourable conditions. The boys here are standing up to things very well—it certainly is a "war of nerves," but this garrison has Jerry licked. Everyone is so homesick—we were all keen enough to get away, but we have changed our opinions rather quickly. Australia certainly is a paradise, and its comforts and pleasures are just a heavenly dream.

Homesickness accounts for some of the fierce fighting by Australians in this area—they must take their spite out on someone for the predicament of longing for something which they little valued when they had it. We have been bombed here day and night for three months now, and, as you may have heard, had two Majors killed, and altogether, through wounds, sickness and other troubles, have lost just about 30 chaps from the unit; but still the lads are carrying on well, and hoping for some unexpected move which will end things quickly. I suppose we would almost stand unique, having seen more action than any other similar unit in this war or the last—I'd swap it all for a good feed at the "Oriental" right now.

You might put an advertisement in the "Argus" for us: "Excellent practice, Libya, good climate, no opposition. Owners wish to sell for health reasons—cheap." — *Australian Journal of Dentistry*.

Rockefeller Foundation Review of 1940 Activities Shows Greatest Need of Aid in Public Health Field

by MAYNARD K. HINE

(Excerpts from *Fortnightly Review*, Chicago D. Soc., Sept. 15, 1941.)

A review of the activities of the Rockefeller Foundation for 1940 has been released recently. Last year the appropriations of the Foundation totalled \$9,854,497. It is interesting to note that the officers of the Foundation felt the greatest need for aid was in the field of public health. In 1940 the Rockefeller Foundation helped to establish a school of public health

in Michigan, sponsored a study of the yellow fever mystery in Africa, battled the *Anopheles gambiae* mosquito in Brazil and reported progress in developing prophylactic treatments for influenza. The foundation also organized a health commission which was sent to Europe to aid the local government organizations to study health problems, sanitation, control of epidemics, re-establishment of local health services, and the urgent nutrition problems created by the war.

Appropriations for research in the "natural sciences" totalled over \$2,200,000. The third major group of grants was made to support work in the social sciences. Most of the Foundation's appropriations during 1940 in the field of medical sciences relate to teaching and research in psychiatry, neurology, and psychology. Harvard Medical School received four separate grants totalling over \$250,000 for work of this nature.

Disturbing sidelights of the report were the discussions of the effects of the war on the activities of the Foundation. The following quotations from their report make this disruption quite vivid:

"In the shadows that are deepening over Europe the lights of learning are fading one by one. The conception of knowledge as an international responsibility has vanished. The free flow of ideas across boundary lines between laboratories and universities has dried up. . . In two Czechoslovak universities during the winter of 1939 and 1940 hundreds of students were imprisoned and many were shot. Finally the universities were closed and most of the student body was deported for forced labour in Germany. In Holland in 1940 as in Poland in 1939, there were many arrests and deportations of students and professors. . . Condition of university life and standards on the continent is now little short of appalling. Over all the continental universities hangs the pall of uncertainty and fear. In such surroundings scholarship withers and only through heroic struggle keeps itself alive. When the German Minister of Justice tells the Association of University Professors that the old ideal of objectivity was nonsense and that today the German university professor must ask himself one question: 'Does my scientific work serve the welfare of National Socialism?' he is voicing a doctrine which if broadly applied

spells the end of Western scientific thought. The end of the day has come in which Claude Bernard could say: 'I give small thought to where the truth will lead me, provided that I find it.' . . . Even neutral countries are under pressure to permit a totalitarian interpretation in the teaching of such subjects as economics, political science and sociology."

Full Credit Given to Individual Authors

The Periodontia Department of New York University College of Dentistry cordially invites each investigator in the field of periodontal disease who has published a paper or papers containing the results of either laboratory research or clinical observations which bear directly or indirectly upon the aetiology or treatment of periodontal disease in man or animals (1) to submit a concise summary of those of his papers which he deems to be his basic contributions to this field and which he considers to be in agreement with his present thinking, or with his experience and thinking up to a time specified by him; and (2) to cite the location and time of appearance of such paper or papers which contain such basic findings; also (3) to enclose any additional statement that may seem necessary to him to amend the foregoing statements so that they more accurately reflect his present opinions.

These summaries will, therefore, contain only present opinions, rather than the total results of each worker's endeavours which may, in addition, include errors, duplications, altering viewpoints, etc. The compilations of such summaries which will *contain the essence of each investigator's present thinking will then be published in book form* and will, therefore, not be a series of abstracts of papers on either the aetiology or treatment of periodontal disease.

The summary should be in our hands not later than March 15, 1942. (209 E. 23 St., New York, N.Y., U.S.A.)

Chicago Dental Project Reports on Work Done

More than 4,000 school children have had their dental work completed through the operation of the dental health program inaugurated in Chicago last September by the Board of Education, the Board of Health and the Works

Projects Administration. This announcement was made recently by Superintendent of Schools, William H. Johnson, who also disclosed that 6,000 teeth were extracted, 40,000 plastic fillings inserted and 1,200 relieved of infections about the face and jaws. An average of a little more than seven fillings per child was obtained in the course of the program.—*Jrnl., Illinois S. D. Soc., July, 1941, Vol. 10, No. 7, p. 281; per A.D.A. Release.*

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New Jersey Appropriates Funds for Dental Health Program

The state of New Jersey on August 4 approved a bill appropriating \$12,000 to the New Jersey State Department of Health to organize a rural mobile demonstration dental program. The purpose of the appropriation, as stated in the bill, is to aid rural areas in establishing facilities for treating dental defects in poor children.—*A.D.A. Release.*

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Defects Discovered in Examination of Youths

The health units of the National Youth Administration for New York City and Long Island examined 13,297 young men and women during the eleven month period ended July 31, according to a recent report. The defects and diseases most frequently found were dental defects in 92.6 per cent, visual defects in 40 per cent, malnutrition in 14.3 per cent and cutaneous lesions in 11.5 per cent. Diseases of the nose and throat occurred in 8.5 per cent, heart disease in 5.5 per cent and high blood pressure in 4 per cent. Those who showed need for remedial treatment were referred to private physicians, private dentists or hospital and dental clinics if they could not afford private care.—*A.M.A. Journal, 9/13/41; per A.D.A. Release.*

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Enrolment in Dental Schools

The enrolment in the thirty-nine dental schools of the United States at the opening of the present academic year as compared with the enrolment in last year's Dental Students' Register as of October 15, 1940, is 8,371 as compared with 7,720 last October, an increase of 651 students.

The record is gratifying indeed. This enrolment is the largest in the last fifteen years. In common with many others, we have been

concerned at the fact that the total number of graduates from the dental schools in 1941 was the smallest in the last twenty years and, with two exceptions, the smallest in forty-four years. We have also been concerned at the fact that, during the last decade, the ratio of dentists to population has decreased for the first time in the history of organized dentistry in this country. It has been estimated that it would take at least 2,250 graduates each year to meet the loss by death and retirement and the anticipated increase in population.—*Excerpt from Editorial, Jour. of A.D.A., Nov., 1941.*

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Military Manpower in the United States

The military manpower of the United States at the present time, according to statisticians of the Metropolitan Life Insurance Company, amounts to 28 million between the ages of 18 and 44 and this number is expected to increase to a high point of 30.3 million about the year 1955.—*A.D.A. Release.*

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Chicago Dental Society Essay Award

Cash prizes totalling \$500 for the best two essays on dental subjects are offered by the Chicago Dental Society, the winners to present their essays at the opening general session of the 1942 Midwinter Meeting. The first award offered is \$300, the second, \$200. The meeting will be held at the Palmer House February 23, 24, 25 and 26. The purpose of this competition is to encourage scientific research and investigation in dentistry.—*Jour. of A.D.A., Nov., 1941.*

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Dental Practice Acts: Sale of Artificial Teeth Not a "Dental Operation"

The Indiana State Board of Dental Examiners sought to obtain an injunction on Sam Lapon, doing business as the Federal Dental Laboratory, on the ground that he was practising dentistry without a licence. The evidence indicated that the defendant maintained a display room where the customer could select from samples the kind of plates, bridges or artificial teeth desired. The customer was then asked to procure an impression of his mouth from a licensed dentist. This impression with the customer's order was then sent to Chicago, where the artificial teeth were manufactured. When completed the teeth were returned to the laboratory, which delivered them to the

customer. The customer paid both the laboratory and the dentist. In this way, the defendant had no direct physical contact with the mouth of the customer. There was no evidence as to who fitted or adjusted the teeth if such was required, so this could not be taken into consideration. On the basis of this evidence, the lower court refused to grant an injunction to the board of dental examiners and the board appealed to the Supreme Court of Indiana.

The only question presented, said the court, is whether the defendant's method of doing business and the advertising thereof were within the definition of the practice of dentistry contained in the dental practice act, the pertinent portions of which are:

Any person shall be said to be practicing dentistry . . . who . . . advertises . . . that he can or will attempt to perform dental operations of any kind . . . or supplies artificial teeth as substitutes for natural teeth. . . And, provided, further, that nothing in this act shall interfere with the performance of mechanical work on inanimate objects by any person employed in or operating a dental laboratory. . .

The sale of artificial teeth is not a dental operation. Their manufacture from inanimate impressions is permitted by the section quoted above, which would be ineffective if they could not be sold.

The dental board concedes, continued the court, that an unlicensed laboratory may sell to a licensed dentist, but asks us to read into the statute a prohibition against sale to the public. The statute does not forbid such a sale even though the sale of artificial teeth which do not fit may be detrimental to the health of the user. An amendment to forbid such a sale may be desirable, but the remedy lies with the legislature and not the courts. Upon the facts in this case, the defendant is not violating a prohibition of the statute. Judgement affirmed. —*State ex rel. Kennedy et al. v. Lepon*. 36 N.E. 2d. 276 (Ind. 1941); per A.D.A. Release.

Several Drugs Added to List

Addition of a number of drugs to the list of preparations which may not be purchased except on individual prescription from a physician or dentist was disclosed today in the Canada Gazette.

The drugs are aminopyrin, barbituric acid, betamine propylbenzene and its salts, cinchophen and neocinchophen, dilantin sodium, orthodinitrophenal and its compounds, sulphanimide and its salts and its derivatives, and thyroid, thyroxin and its salts.—*Toronto Globe & Mail*, Nov. 10, 1941.

Criminal Negligence

In these times one would think that there was no longer any necessity for reminding professional men to be careful when using the x-ray machine. The time worn adage "Familiarity breeds contempt" is indeed true. Some men, known to you and me, still hold an occasional film for a patient, and many more forget to stay out of the path of both the primary and secondary rays.

Last Spring your editor had the opportunity of talking to Dr. Ennis, Professor of Roentgenology at the University of Pennsylvania, and he emphasized the fact that a medical colleague was then treating a score of young men for x-ray burns of various degrees. Some of the cases have already resulted in digital amputations and have not been checked.

Dr. Ennis spoke in Newark about two years ago, but evidently some of his listeners thought that, like Superman, nothing could harm them.

Recently, in a nearby clinic, several men were observed operating an x-ray machine with what appeared to be studied carelessness. Ask your dental friends if they ever hold films and you will be surprised at the number admitting that they are guilty of criminal negligence to their families and themselves.—*Bull. of Newark Dental Club*, V. XIV, No. 1, Oct., 1941; per A.D.A. Release.

Brooklyn Dental Health Day

The Second District Dental Society of New York carried out recently a very successful Dental Health Day program in Brooklyn. The motive was "What Dental Care Can Do For You" with special reference to the physical, mental, economic and social benefits to be desired by the public.

The program of the day was held at Hotel Bossert from 1 p.m. till 11 p.m. and during this entire time various health and educational exhibits were shown. The session from 2 p.m. to 5 p.m. was devoted to children,

mothers and teachers, addresses being given by a number of speakers. The last speaker used a basket of fruit to point out the value of vitamins, and the advantage of fruit over candy. At the close of this address there was a drawing for the basket of fruit. Then followed a motion picture with sound effects, entitled, "Value of a Smile." The hit of the afternoon session was the Quiz Contest, when five boys and five girls were chosen to be contestants and suitable prizes were awarded.

At the evening session following the addresses a motion picture entitled, "Behind the Smile" was shown, which showed action shots

of typical people, starting with baby, on up through school age into college, marriage and the family life, with the smile always an asset.

Gies Award Given to Dr. F. B. Noyes

Dr. Frederick B. Noyes, Dean Emeritus of the University of Illinois College of Dentistry, was given the William John Gies award for achievement in research at the recent convocation of the American College of Dentists in Houston, Texas.—*Fortnightly Review, Chi, D. Soc., Nov. 15, 1941.*

IN MEMORIAM



CAPTAIN DONALD McNABB

Captain Donald McNabb, of Edmonton, was killed in an aeroplane accident in England on October 18, in the course of his duties as an officer of the Canadian Dental

Corps, according to news received recently. This is the first loss to the Corps of a dental officer on active service.

Captain McNabb was born in Alberta, attended public school at Grassy Lake and received his high school education at Lethbridge Collegiate Institute.

He commenced the study of dentistry at the University of Alberta in 1927. After three years, he transferred to the Dental Department of the University of Toronto, graduating in 1932. After several years on the staff of the Edmonton school clinic, he practised his profession in Edmonton till his enlistment in the Canadian Dental Corps in November, 1939.

Captain McNabb was a member of the Masonic Order and the Edmonton Kinsmen's Club. He was a past president of the Edmonton Dental Society and was greatly interested in organized dentistry and the advancement of his profession.

He is survived by his mother who resides in Lethbridge, Alberta.

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J. Doan Musselman, of Toronto, well-known representative of the L. D. Caulk Company, died November 5.

He was on his way home from a business trip to the West when he was stricken with a heart attack.

Mr. Musselman is survived by his widow, a daughter and a son.

... SECTION FRANÇAISE ...

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Votre intérêt est en jeu!

Nous vous avons déjà démontré l'importance d'une solide organisation professionnelle nationale.

En voici un exemple frappant:

Il se prépare en ce moment à Ottawa une législation sociale d'assurance-santé, ayant pour but de mettre les soins médicaux et dentaires à la portée de tous les citoyens du pays, moyennant une prime annuelle modique (\$14.00 à \$16.00 par année.) Ces soins incluraient les services du médecin, chirurgien, anesthésiste, dentiste, hospitalisation, garde-malade et médicaments. La prime telle qui repartie entre ces différents groupes, accorderait au dentiste la somme de \$0.64 par an *per capita*! L'Association Dentaire Canadienne, notre seul corps professionnel national, essaie, avec les faibles moyens dont elle dispose, de faire modifier ou retirer cette législation le cas échéant. Si elle échoue, ce ne sera pas faute d'efforts de ses officiers et délégués, mais bien parce que ses moyens sont limités.

Sept provinces se sont déjà engagées à porter leur contribution annuelle de \$1.00 à \$4.00 en 1942, à condition que toutes les provinces fassent de même. La huitième est à faire une campagne d'éducation en ce sens et dont le résultat n'est pas douteux. Et nous, du Québec, qu'allons-nous répondre? Il en dépend de vous, confrère! Pouvons-nous prendre le risque de perdre des privilèges qui nous sont précieux, pour l'amour de quelques dollars par année?

Qui s'occupera de maintenir dans les limites raisonnables, les droits de douane et d'accise sur les produits dentaires? Qui verra au rétablissement de nos confrères licenciés de l'armée suivant un plan rationnel?

En un mot: qui veillera sur nos intérêts dans le domaine fédéral?

L'Association Dentaire Canadienne est là.

Fournissez-lui les moyens, elle fera le travail.

Le Comité National du progrès Dentaire.

Un cas de névralgie d'une branche dentaire du trijumeau traitée avec succès par des injections sous-cutanées de vitamine B₁ synthétique*

par F. NAAR et le Dr SLIOSBERG
Professeur à l'Ecole Odontotechnique.

Des résultats très intéressants ont déjà été obtenus par l'administration parentérale de vitamine B₁ synthétique, dans différentes algies.

Dans l'observation rapportée ci-dessous concernant un cas de névralgie faciale essentielle fruste, une amélioration nette a été obtenue dès la 5^e injection, et la guérison après la 8^e.

Depuis plusieurs années les publications françaises et étrangères ont mis en évidence l'utilité de l'administration parentérale de vitamine B₁ synthétique au cours de divers états neurologiques, et en particulier dans les algies; l'analogie clinique avec les formes polynévritiques du béri-béri a été le point de départ de l'élargissement considérable des applications thérapeutiques de cette vitamine. La facilité de son administration depuis l'introduction en thérapeutique de la vitamine synthétique, jointe à sa parfaite innocuité, ont permis d'étudier son action dans diverses affections neurologiques en dehors du béri-béri.

Il semble découler de la plupart de ces observations que la vitaminothérapie B₁ trouve une utilité de prédilection dans les cas d'atteinte de la fibre sensitive, d'où son indication majeure: les états algiques; l'un de nous a publié en 1937 une observation sur un cas de névralgie crurale, fortement améliorée par cette médication (1). Il s'est attaché depuis à l'étude du traitement par la vitamine B₁ des algies des amputés (2). Ici encore les résultats furent très favorables; d'ailleurs une série d'observations (inédites) sur une vingtaine de névralgies sciatiques, intercostales et crurales, plusieurs cas de zona, de plexites du bras, etc. ont pleinement confirmé l'action antalgique de la vitamine B₁, et leurs résultats concordent avec ceux rapportés par MM. Coste et Metzger (3).

La littérature mondiale a consigné plusieurs cas de névralgie faciale essentielle guéris par cette médication (voir la bibliographie Obrefeld). Nous avons eu l'occasion de traiter avec succès un cas d'hémicranie cataméniale (observation inédite); c'est ce cas qui nous a incité à essayer d'appliquer la vitaminothérapie B₁ chez la malade dont nous rapportons l'observation.

Observation: Madame R... âgée de 45 ans, concierge, s'est présentée à la consultation de l'Ecole Odontotechnique dans le courant du mois d'octobre 1938 pour des phénomènes douloureux localisés au maxillaire supérieur du côté droit.

A l'interrogatoire, nous avons appris que ces douleurs ont débuté subitement, sans aucune cause, en décembre 1936. La malade ayant consulté immédiatement

(*) Société Odontologique de France: Séance du 28 Février 1939.

son dentiste, celui-ci procéda à l'extraction de la deuxième prémolaire supérieure droite, cette dent dépulpée et couronnée lui ayant paru suspecte. L'intervention n'amena aucune amélioration. Une radiographie ne montra au niveau des 8.7.6 qu'une carie non pénétrante, qui fut obturée immédiatement.

Les douleurs persitant sans cesse, la malade consulta son médecin qui conclut à l'existence d'une névralgie (?) et fit pratiquer des injections intra-musculaires, puis intra-veineuses de Naïodine; ce traitement demeurant sans résultat, une nouvelle radio de la région fut reprise, et la malade envoyée chez un oto-rhino. Ce dernier trouva un kyste paradentaire au niveau de la 6|. On pratiqua l'extraction de cette dent et du kyste; au cours du curettage, il se produisit une communication entre le sinus et la cavité buccale. L'examen de la dent extraite montra une mortification pulpaire sans carie.

Aucune amélioration n'étant survenue au bout de huit mois, la malade vint consulter à l'Ecole. Elle nous dit ressentir une douleur profonde, d'intensité moyenne, en éclair, qu'elle compara à une secousse électrique, et qui, à peine ressentie, cesse aussitôt; cette douleur, localisée dans une région limitée par la canine supérieure droite s'irradie vers l'œil droit, et parfois, mais rarement, jusqu'à la tempe; elle ne s'accompagne d'aucune réaction cutanée. Les crises apparaissent à n'importe quel moment de la journée, avec une fréquence assez irrégulière, de 20 à 25 fois par jour; elles ne surviennent cependant jamais la nuit. Du fait de la fréquence des crises, il persiste un état subdouloureux de la région, dont le malade n'a conscience qu'au toucher.

Quoique le plus souvent spontanée, la douleur semble favorisée par certains facteurs: contact d'aliments ou même de la langue sur la canine; la mastication n'est pas entravée, tous les contacts ne la provoquant pas également; c'est surtout le temps froid et humide qui exerce une influence nette; la malade a, en effet, remarqué que ces douleurs n'apparaissent que l'hiver.

A l'heure actuelle, la patiente n'est soulagée que par des analgésiques et des applications d'air chaud sur la joue droite. Son état général, dont nous nous sommes inquiétés, est excellent et ne présente rien de particulier à retenir.

A l'examen cervico-facial, rien d'anormal. Aucune réaction douloureuse à la palpation des points de Valleix.

Rien de particulier non plus à l'examen du système dentaire.

Au maxillaire supérieur, du côté droit, manquent 6 5 4|. Les 8 7 3 2 1| vivantes, réagissent tout à fait normalement aux agents thermiques.

Dans le vestibule, au niveau de la trépanation effectuée pour enlever le kyste, légère tuméfaction, dure, un peu douloureuse à la forte pression.

Au maxillaire inférieur, rien à noter.

Nous avons fait reprendre une radiographie de la région, qui nous a montré au niveau de l'alvéole de la 5| une légère condensation du tissu osseux.

Afin d'éliminer toute cause locale précise, nous avons proposé à la malade une petite intervention, à ce niveau, qu'elle a refusée.

Du côté nasal, et à la diaphanoscopie des sinus, rien de particulier.

Le diagnostic de ces douleurs névralgiques nous a paru assez délicat.

Nous avons éliminé le diagnostic de la névralgie symptomatique étant donné l'absence de ses symptômes: pas de douleurs continues ni de douleurs à la pression aux points de Valleix; pas de causes dentaires appréciables, surtout après les deux

interventions sur les causes dentaires possibles; pas de causes nasales ou oculaires. Nous n'avons pas non plus retenu l'éventualité d'un processus névralgique analogue à la névralgie des édentés, par compression d'un filet nerveux au niveau d'une cicatrice d'extraction, car au niveau du maxillaire incriminé une première prémolaire seule avait été extraite plusieurs années avant l'apparition de toute douleur.

En tout cas, nous avons pu éliminer le névralgisme, l'état psychique de la malade nous paraissant tout à fait normal.

En effet, si les caractères de la douleur, brusque, intense, avec accalmie totale, rappellent ceux de la névralgie faciale essentielle, le tableau clinique en est très incomplet puisqu'il manque le temps facial et le temps sympathique. Peut-être s'agit-il d'une forme fruste, ou de début?

La qualification de la douleur, strictement en éclair, durant juste le temps de la ressentir, montrerait, d'après les classiques, qu'il s'agit d'une excitation de la racine du ganglion ou du noyau.

En tout cas, nous avons pu éliminer le névralgisme, l'état psychique de la malade nous paraissant tout à fait normal.

Quelle thérapeutique pouvions-nous envisager pour soulager la patiente, si nous ne voulions pas nous en tenir à la facile et décevante médication analgésique? La résection du rebord alvéolaire, point de départ de la douleur? ou l'ablation de la portion d'os condensée dans l'alvéole de la deuxième prémolaire?

Cette intervention, d'ailleurs énergiquement refusée par la malade—dont l'état n'a pas été amélioré par les deux interventions précédentes—nous a paru nous réserver un résultat assez aléatoire.

Il nous restait l'alcoolisation du nerf sous-orbitaire au niveau de son émergence, ou du nerf maxillaire supérieur au niveau du trou grand rond.

A cette intervention assez délicate, nous avons préféré essayer les injections quotidiennes sous-cutanées de vitamine B₁ synthétique, procédé infiniment plus facile et d'une innocuité absolue.

Dès la 5^e injection de 1 cg. de vitamine B₁ synthétique, la malade a été soulagée; en effet, la douleur a perdu de son acuité, et après la huitième injection, celle-ci a disparu complètement.

A l'heure actuelle, depuis plus de trois mois, la patiente ne ressent aucune douleur.

Sans prétendre généraliser la portée de cette observation jusqu'ici unique à notre connaissance, il nous a paru intéressant de la rapporter ici, étant donné la fréquence des névralgies faciales en odonto-stomatologie, et la rapidité avec laquelle notre malade a bénéficié du traitement par la vitamine B₁.

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Revue de Stomatologie

PAYNE (Reginald T.).—Infection des glandes salivaires.—*Proceedings of the Royal Society of Medicine*, t. 31, n° 4, février 1938.

Payne expose une série de constatations faites à l'occasion de 208 cas d'infection des glandes salivaires (117 parotides et 91 sous-maxillaires). En dehors de l'examen clinique, on doit, en pareil cas, procéder à un examen cytologique et bactériologique de la salive ainsi qu'à une radiographie, parfois même après injection de lipiodol.

Parmi les affections parotidiennes figurent 45 formes aiguës, 52 récurrentes et 11 chroniques. La forme aiguë est parfois la conséquence de la négligence des soins postopératoires quand l'alimentation par la bouche est impossible. C'est une affection qui oblige le chirurgien à attendre les bras croisés que l'abcès se forme. Chez les malades appartenant à ce groupe, l'infection de la glande se fait par voie sanguine, par voie ascendante ou encore par extension à partir des organes voisins. L'infection par septicémie ou pyémie n'est qu'une curiosité. En général, les sujets atteints d'une infection de ce genre font une parotidite qui est invariablement du type ascendant. Une cellulite, une lymphadénite ou une ostéomyélite de la mandibule peut gagner la parotide par les voies lymphatiques. Mais c'est presque toujours par la voie ascendante que la glande se prend soit après une intervention, soit pendant une affection fébrile, soit encore chez les malades qui s'alimentent très peu par la bouche. En somme, en clinique, on doit songer à une intervention opératoire surtout sur l'abdomen, à des affections fébriles comme la fièvre typhoïde, le typhus ou la pneumonie, aux états cachectiques, au jeûne oral, par exemple après hématomé (236 cas sur 1.000 ont été observés par Rolleston et Oliver), à l'aliénation, aux obstructions du canal et aux affections buccales. Dans les cas de Payne, on a pu, dans 42 cas, rattacher l'affection à une cause comme l'infection ou l'extraction dentaire (6 cas), le coup de froid (2 cas), la pneumonie (2 cas), un calcul de la parotide (2 cas), l'hématémèse (6 cas), une intervention (2 cas), des infections aiguës (5 cas), etc. La parotidite pyogénique survient surtout dans le tiers distal du canal où se forme un véritable "thrombus" qui gêne l'écoulement de la salive. En général, il s'agit simplement d'une inflammation catarrhale à laquelle la suppuration ne succède que si la résistance du malade est abaissée. En pareil cas, il se forme, dans les petits conduits ou dans les alvéoles, de petits abcès qui peuvent fusionner puis rompre la capsule de la parotide. Parfois même, il peut apparaître, dans ces conditions, une parotidite nécrotique aiguë. D'une façon générale, l'expression d' "anthrax" de la parotide est assez appropriée car l'agent en cause est un staphylocoque et les lésions ressemblent assez à ce qui s'observe au niveau de la peau et du rein. Dans les parotidites de ce genre, on a retrouvé des germes très nombreux. Le plus souvent, il s'agit de *staphylococcus aureus* (25 cas), de *streptococcus viridans* (5), de *streptococcus haemolyticus* (2), de pneumocoques (4), de colibacille atypique (1) et de *B. fusiformis* (1). Les constatations faites en ce qui concerne le staphylocoque ne sont pas surprenantes car Seifert a constaté qu'après intervention sur l'abdomen ce germe augmente de fréquence et de virulence dans la bouche.

Au point de vue des formes cliniques, on doit distinguer d'abord les formes catarrhales caractérisées par l'augmentation de volume, une douleur localisée et un peu de fièvre; en même temps, la compression fait sourdre un peu de muco-pus. Dans la forme suppurée, la sensibilité à la pression est extrême, l'œdème est étendu, la fièvre est élevée et l'état général troublé.

La capsule est généralement franchie par l'abcès à la partie inférieure et antérieure de la glande. Parmi les complications, on doit mentionner l'invasion du médiastin, de l'articulation temporo-maxillaire, de l'os maxillaire, de la jugulaire, du facial, etc. Sur 54 cas, des complications sont survenues cinq fois: dans 2 cas, le pus a gagné le méat auditif externe, dans un cas le pharynx, dans un cas le muscle sterno-mastoïdien, dans un cas le masseter; dans un cas il y a eu nécrose de la mandibule (*bacillus fusiformis*). Le traitement ne doit pas se borner à des applications chaudes. Une fois que le diagnostic étiologique est fait, on doit en général faciliter l'écoulement de la salive d'abord en recourant aux massages, puis en mettant le malade à un régime aussi solide que possible. La mastication stimule puissamment la sécrétion de la salive. L'usage de chewing-gum est recommandable de même que l'usage de boissons acides et de bains de bouche. La radiothérapie ne donne pas des résultats très encourageants. Les indications du traitement opératoire sont difficiles à poser à cause de la résistance de la capsule de la glande, résistance qui rend le palper difficile à interpréter. On n'aura pas recours à ce traitement dans les cas atténués où le pus s'écoule spontanément ou du fait des massages. Par contre, il est absolument nécessaire quand il existe un abcès extracapsulaire où l'intervention immédiate est indispensable. D'une façon générale, si, pendant vingt-quatre heures consécutives, l'écoulement de pus spontané ou par massages ne survient pas, l'opération est urgente. Dans ces interventions où l'existence d'une collection n'est pas inquiétante, la libération de la parotide est essentielle. L'incision de la glande se fait parallèlement à la direction des branches du facial. L'incision cutanée de Lilienthal, qui est très satisfaisante, commence en avant de l'oreille externe au niveau du zygoma, passe devant l'oreille et s'incurve juste au-dessous de l'angle de la mâchoire pour se terminer sur le bord antérieur du masseter. Ensuite, après dissection de la peau, 5 ou 6 incisions radiaires parallèles aux branches du nerf facial sont pratiquées sur une longueur de 10 à 25 mm. Ce traitement a été pratiqué trente fois sur cinquante-quatre. Dans 11 cas, la mort est survenue.

La parotidite récurrente, qui a été observée cinquante-deux fois dont trente-sept chez les femmes, fut bilatérale dix-neuf fois. La salive est alors légèrement trouble du fait de petits flocons de muco-pus, de cellules épithéliales et de cellules de pus. Le *streptococcus viridans* est l'organisme le plus souvent retrouvé (9 cas), ensuite les pneumocoques (5 cas), le *staphylococcus aureus* seul ou associé au *streptococcus viridans* (3 cas), le bacille de Pfeiffer (2 cas). Dans 8 cas, la salive a été stérile.

L'examen au lipiodol montre des dilatations terminales globulaires, segmentaires ou fusiformes des canaux. Sur ces 52 cas, on a retrouvé quatorze fois un facteur étiologique représenté par l'infection dentaire (2 cas), par la denture, la tonsillectomie, etc. Dans un cas l'examen histologique a montré des altérations prolifératives à l'intérieur des petits canaux. Le traitement consiste en massages entre les attaques pour supprimer l'obstruction qui peut exister dans le canal principal; l'avulsion du nerf auriculo-temporal et les rayons X peuvent être également utiles.

Les infections de la glande sous-maxillaire sont rarement aiguës. Sur 91 sujets, 74 présentaient des calculs dont 56 non compliqués. Sur les 17 autres, il y avait infection chronique (sept fois), obstruction du canal (six fois), etc. Les formes aiguës sont presque toujours dues à une infection ascendante et alors il survient très souvent de la cellulite avec œdème extrême pouvant s'étendre jusqu'à la glotte. Les calculs sous-maxillaires peuvent entraîner des complications allant jusqu'à l'angine de Ludwig. Les 18 cas de formes aiguës ont été dus à la fixation d'un calcul; dix fois elles étaient limitées au canal et à son voisinage; cinq fois l'inflammation était assez étendue pour gêner la déglutition et la respiration. Le diagnostic est souvent difficile et les erreurs fréquentes. Le traitement consiste à enlever le calcul quand

il en existe un. Quand l'infection est profonde ou accompagnée de lymphadénite, on doit procéder à un drainage. Dans certains cas, il est préférable d'exciser la glande sous-maxillaire et de drainer la plaie. Mais l'intervention est difficile et pénible et le drainage doit également intéresser la région sous-maxillaire. En outre, il doit être externe et exige la section du muscle mylohyoïdien. L'infection récurrente de cette glande est rare. L'infection chronique a été observée dans 7 cas sur 91. Elle est généralement due à des calculs ou à une obstruction due à d'autres causes. Quand il s'agit de calculs, la symptomatologie est plutôt celle d'une obstruction récurrente du canal.

P.-E. MORHARDT.

Les Vitamines dans la Médecine Infantile

par le docteur RINNE

(suite)

A UN AN:

L'enfant a 8 dents. Il commence à se tenir sur ses jambes. Il a besoin, à cette période, d'une ration riche en albuminoïdes (dépenses de croissance). Que faut-il donner? Oeuf ou viande?

En France, on donne l'œuf très tôt: 8 ou 9 mois. En Allemagne, très tard, à partir de deux ou trois ans seulement. Par contre, les Français ne donnent la viande qu'à un an et demi (Marfan), d'autres beaucoup plus tard encore; tandis que les Allemands la donnent beaucoup plus tôt. On peut donc donner les deux produits très tôt: un œuf à 1 an, la viande à 1 1/2 an.

Lorsqu'il y a anémie, on commence l'administration de protéines beaucoup plus tôt: 4 cuillers à café, par exemple, de viande crue hachée, de cheval de préférence, pour éviter le ver solitaire, dès le 6^{me} mois. Les viandes donnent des putréfactions alcalines qui ralentissent le péristaltisme. Il ne faut pas de viande grasse (porc par exemple), ni de viande cuite à la casserole, car elle s'imbibe de graisse. On emploie de préférence la viande rôtie.

Quatre repas seulement à un an:

8 heures du matin: une tartine beurrée avec un œuf un jour sur deux, ou 1/2 œuf chaque jour, 100 gr. lait non sucré, à la tasse.

10 heures: un jus d'orange, ou le lait non absorbé le matin.

12 heures: un peu de soupe de ménage, 5 à 10 cuillers à soupe. Légumes, pommes de terre, un petit morceau de viande (15 à 30 gr. le jour où il n'a pas eu d'œuf le matin) ou un peu de poisson frais. Comme dessert, un fruit ou un bonbon.

4 heures: une tartine beurrée et 100 gr. de lait à la tasse.

7 heures: un biberon de 150 à 200 gr. de lait.

Le lait quotidien est donc de 350 à 400 gr. maximum.

En 1936, eut lieu à Genève un congrès de pédiatrie, en vue d'établir, en conclusion de toute une série de travaux, la quantité de lait à fournir à l'enfant. On entendit d'abord un exposé fait par des physiologistes, qui, se basant uniquement sur des recherches chimiques et des travaux sur des animaux de laboratoire, concluaient à une ration d'un litre de lait par jour. Cela souleva dans l'assemblée un tollé général. Docilement, nos cerveaux recommencèrent leurs travaux, leurs calculs, et aboutirent à 500 gr. par jour, à un an. Ce chiffre est encore trop fort; il fut adopté sous la pression peut-on dire, des Français en majorité à ce Congrès (les Allemands étaient absents). Les Français préconisent des chiffres trop forts. Il faut le reconnaître, avec 500 gr. — 1000 gr. de lait par jour, entre un et deux ans, l'enfant fait de la suralimentation. Il ne peut supporter ce régime, que s'il a un estomac solide et robuste. C'est un enfant très gros, très râblé entre un et deux ans. Mais son foie et toutes ses glandes digestives en général, sont soumises à une rude épreuve. Cela va bien tout un temps, il y a accommodation; puis le foie cède, il est fatigué. Il gonfle et ne sécrète plus assez de produit actif et l'enfant maigrit fortement. A l'âge de trois ans, l'enfant est très mince, très maigre et en retard de poids. Il importe donc d'éviter soigneusement de gaver les enfants.

A un an, l'alimentation normale doit compter:

55 calories par kilo, selon Finkelstein.

60 calories par kilo, selon Nobécourt.

100 calories par kilo, selon quelques pédiâtres de plus en plus rares.

C'est un chiffre notablement trop élevé. Les besoins varient selon les vêtements, le chauffage, les mouvements de l'enfant.

A UN AN ET DEMI:

8 heures: un œuf, une tartine et 100 gr. de lait non sucré, à la tasse.

10 heures: un jus de fruit ou un fruit en nature.

12 heures: soupe de légumes, viande (25-30 gr.), pommes de terre, légumes, fruit, eau.

4 heures: une tartine et 100 gr. de lait.

7 heures: soupe de farine, ou une tartine avec 100 gr. de lait ou une portion de soupe aux légumes.

Ceci évidemment n'est qu'un schéma, qu'il est possible de varier et d'améliorer. Ainsi, il serait plus logique de donner le soir l'œuf du matin. Pourquoi? Le premier repas, le matin, ne doit pas être trop copieux, car l'enfant est capricieux. Il importe de ne pas surcharger l'estomac de l'enfant dès le matin, car alors il n'aura pas faim à midi, et ainsi on repêrce ce que l'on croyait avoir gagné en insistant au déjeuner. D'autre part, il y a intérêt à donner au soir un repas pauvre en liquides. L'enfant urine moins au lit, dort mieux. On allège ainsi considérablement le travail et la fatigue de la mère.

La quantité journalière de lait ne doit pas dépasser 300 gr.

DE DEUX A TROIS ANS:

On augmente les quantités selon les besoins et l'appétit de l'enfant. S'il y a eczéma, ne pas donner plus de deux ou trois œufs par semaine. En tout cas, quel que soit l'appétit de l'enfant, ne pas dépasser un œuf par jour.

Il faut beaucoup de discernement, et d'esprit critique, pour tirer de telle ou telle expérience de diététique, la conclusion réelle.

Ainsi, on a longtemps fait état, pour promouvoir les hautes doses de lait, de ce que dans certains pensionnats, on faisant deux groupes d'enfants. Les deux groupes recevaient la même nourriture solide, au point de vue quantitatif et qualitatif. Ensuite, l'un des groupes recevait un supplément de 500 gr. de lait par jour. Ceux-ci, naturellement, étaient mieux portants, le teint plus frais, la hausse de poids plus considérable et plus régulière. Cela peut être dû à plusieurs raisons:

1° D'abord l'augmentation pondérale de la ration. Il faut une certaine énergie, une certaine volonté pour continuer à reprendre du solide, tandis que le lait, liquide, est ingurgité sans effort;

2° La présence de vitamines dans le lait. Le régime des pensionnats est souvent uniforme et pauvre en vitamines: conserves de viande, de fruits et de légumes (pour diminuer le prix de employer les produits préparés par les élèves aux cours pratiques), emploi de margarine, ration de viande faible ou de seconde qualité. Dans ces conditions, rien d'étonnant que l'adjonction de lait suffise à améliorer le tableau. Pour être probante, cette expérience demanderait bien plus de recherches et de précisions dans l'établissement du bilan alimentaire.

Le Professeur Demole, de Suisse, s'est beaucoup occupé de la question. Il a établi le rôle primordial des vitamines dans la nutrition. Des quantités minimales de vitamines incorporées à un régime, suffisent pour guérir des troubles psychiques ou de caractères très accentués.

Avant d'aborder le régime du nourrisson malade, nous allons faire un retour en arrière et traiter en quelques mots de certains troubles aigus des premiers jours de la vie.

L'asphyxie du nourrisson.

Il arrive parfois, dans les six heures qui suivent l'accouchement, plus rarement, au cours du second jour, que l'enfant présente des troubles du rythme respiratoire. Parfois, l'accouchement a eu lieu au forceps, d'autre fois, il s'agit d'une naissance tout à fait naturelle. L'enfant présente des pauses respiratoires, plus ou moins longues, pendant lesquelles la peau de la figure, voire même de tout le corps, bleuit. Les lèvres sont violacées. Le pouls est très petit, voire imperceptible; il est ralenti. La grande fontanelle bombe, au lieu d'être déprimée et affaissée. La turgescence est d'autant plus accentuée que les crises sont plus nombreuses ou plus longues. Puis la respiration reprend, le sang circule à nouveau; la couleur des téguments s'éclaircit, se rose légèrement. Les membres remuent faiblement.

Que se passe-t-il?

Nous sommes en présence d'un cas d'hémorragie cérébrale. Autrefois, on l'attribuait à un traumatisme obstétrical: pression par la cuiller du forceps, ou étirement d'un vaisseau pendant la traction. Tout le monde se consolait puisqu'il y avait un coupable tout désigné: l'obstétricien. Malheureusement pour la statistique, voilà que cet accident s'est manifesté en dehors de la présence d'un médecin responsable, au cours d'accouchements spontanés, très rapides et très faciles, tout ce qu'il y a de plus physiologiques. Aussi, a-t-il fallu trouver une autre explication. On signale actuellement que cette rupture de vaisseau sanguin dans l'encéphale, serait due à la différence de pression en dehors et à l'intérieur de l'utérus. La pression étant beaucoup plus faible à l'extérieur, les vaisseaux dilatés au maximum pourraient éclater localement et laisser transsuder du sang. Ce sang, répandu à la surface du cerveau, augmente considérablement la pression intracrânienne et détermine, tout

comme dans une fracture du crâne de l'adulte, du ralentissement du pouls et de la respiration; c'est un des signes les plus classiques de l'hypertension intracrânienne. Il est dû à l'augmentation de pression au niveau du centre respiratoire, qui se trouve au plancher du quatrième ventricule, près de la ligne médiane. La même hypertension explique le bombement de la fontanelle et la raideur musculaire fréquente pendant les crises; l'enfant est le plus souvent un peu arqué en opisthotonos, c'est-à-dire, la tête rejetée en arrière.

La situation est assez angoissante; il faut éviter à la mère les émotions, de peur de tarir son lait. Le père, bien souvent à ce moment, est hors de service, tiré à hue et à dia; il ne reste que les duègnes de la famille, dont l'antiquité, qui sait si bien dire les choses sans avoir l'air d'y toucher, avait fait les pleureuses. Pleurer et gémir sont en effet les talents les plus universellement reconnus à cet âge. . . du moins en ces circonstances! Force est donc au médecin de se tirer d'affaire tout seul. Il faut réveiller la respiration; et pour cela on recourt soit à des excitations mécaniques (légères fessées ou mobilisations de la cage thoracique), soit chimiques (injections intramusculaires d'extrait de lobélie plusieurs fois par jour) ou physiques (inhalation discontinue de carbogène ou semi-continue d'oxygène humidifiés).

Passons en revue ces divers moyens thérapeutiques.

La fessée ou la giffle pourra agir quand la compression cérébrale est faible: un stimulant peu important suffit dans ce cas-là. Mais l'action est de peu de durée et de plus, cela laisse une fâcheuse impression sur la famille; vous êtes sûr, même si tout va bien dans la suite, de ne jamais plus remettre les pieds dans cette famille, et d'être calomnié à pleine bouche. Vous aurez beau demander à l'un des spectateurs de la faire également à la moindre récurrence, personne ne le fera, et ainsi le résultat de vos efforts sera anéanti. Donc, deux obstacles: mauvais effet sur l'entourage et effet trop fugitif.

Le second moyen utilise la propriété bien connue de la lobélie, *lobelia inflata*, de stimuler le centre respiratoire. En potion, elle est souvent employée pour la bronchite chronique et l'asthme. Ici, il faut une action rapide et certaine; aussi recourt-on toujours aux injections de produits spécialisés, tels la lobéline Sandoz ou le Lobélium. On emploie le titrage fort au début, pour diminuer dès le second jour.

Comme malgré cette injection, on n'a pas de modification immédiate de la respiration, et que le besoin d'oxygène est intense, on remédie à l'insuffisance respiratoire par l'enrichissement de l'air inspiré en oxygène. On donne donc de l'oxygène pur à inhaler. On le fait préalablement barboter dans l'eau, car à l'état pur, il est trop desséchant pour les muqueuses. Si le mélange inhalé est trop riche en oxygène, le sang ne contient bientôt plus assez d'anhydride carbonique pour exciter le centre respiratoire et on risque de provoquer de l'apnée, c'est-à-dire un arrêt de respiration. Ce ne serait guère de chance, d'arrêter la respiration en voulant précisément la régulariser. Aussi, chaque fois que cela est possible, est-il préférable de donner du carbogène, c'est-à-dire un mélange convenablement dosé d'oxygène et d'anhydride carbonique. Le centre respiratoire est ainsi continuellement excité, en même temps que les poumons reçoivent une quantité supplémentaire d'oxygène.

Il faut employer ces moyens avec persévérance, parfois pendant plusieurs jours. Il est dangereux de s'arrêter trop tôt.

Parfois, malgré tous ces moyens, la situation perdure et même s'aggrave. C'est que le vaisseau sanguin a continué à couler un petit temps, ou que le liquide de résorption, c'est-à-dire, la lymphe secrétée au contact du sang extravasé, dans le but de liquéfier le caillot et d'en permettre la résorption, est trop abondant. L'hypertension intracrânienne a donc augmenté. Les symptômes se font plus graves: crises plus

longues, plus fréquentes ou plus intenses. Dans ces cas, l'hésitation n'est pas de mise, il faut une ponction lombaire. Elle est plus facile à pratiquer que chez l'adulte, mais il faut bien connaître ses repères. Le liquide est rougeâtre ou xanthochromique, selon le temps qui s'est déjà écoulé. La ponction amène une sédation de plusieurs jours, voire une amélioration définitive.

Pendant tout ce temps, il faut donner du lait à la cuiller, donner les soins de propretés élémentaires. Il est bon aussi de prévenir les parents de la possibilité de séquelles: cela est d'autant plus facile et les peindra d'autant moins que, d'eux-mêmes, ils le croient. Le pronostic est variable. Sur trois cas que j'ai eu personnellement à soigner, les résultats furent les suivants:

Le premier, en mai 1930, accouchement naturel, apparition très précoce de l'apnée: respiration artificielle, insufflation de bouche à bouche, injections répétées de lobéline et de coramine. La lobéline ou la coramine faisant reprendre la respiration et les pulsations cardiaques pendant dix à quinze minutes, puis l'un et les autres diminuaient rapidement. L'insufflation de bouche à bouche ou la respiration artificielle furent continuées pendant près de deux heures; et à la fin, malgré la persévérance, on sentait s'espacer pouls et respiration. L'enfant est mort.

Le second cas, en novembre 30, accouchement au forceps, apparition tardive, 34 heures après la naissance, de la dyspnée. Donc une lésion relativement bénigne. Lobéline et oxygène pendant plusieurs jours. Pas de ponction. Guérison complète.

Le troisième cas se situe en Février 38; l'accouchement fut spontané. Huit heures après, apparurent les premiers signes: raideur, apnée et coloration bleuâtre des téguments. Turgescence de la fontanelle. Lobéline, oxygène, puis carbogène, améliorèrent le tableau, mais une ponction lombaire fut quand même nécessaire le quatrième jour. Elle amena une sédation complète de tous les symptômes.

Issu de parents très nerveux (la mère fit, du spasme laryngé de la naissance jusqu'à l'âge de douze ans, à la moindre contrariété), l'enfant présente un retard du psychisme et des mouvements volontaires; à huit mois, il ne sait pas encore tenir la tête droite, il ne s'intéresse à rien, ne reconnaît pas ses parents. Bref, il semble bien qu'il y ait une lésion de l'encéphale; est-elle la cause ou la conséquence de l'hémorragie des premiers jours, voilà ce qu'il ne m'appartient pas de trancher.

Ces troubles de la respiration sont une des plus critiques situations; il importe de savoir se décider rapidement et agir en conséquence. Bien heureux encore quand la sensibilité des parents n'est pas un obstacle aux soins.

J'ai laissé délibérément de côté l'asphyxie blanche et l'asphyxie bleue du nouveau-né; celles-ci se produisant tout de suite après l'accouchement et étant du domaine de l'obstétricien. Le pronostic en est bénin le plus souvent et l'évolution favorable, sauf parfois dans l'asphyxie bleue. L'une et l'autre dérivent d'un accouchement laborieux, trop lent.

Le pemphigus contagieux.

C'est une maladie peu fréquente, à laquelle on attribue de l'importance uniquement quand il vous a empoisonné en clientèle. Le cas que j'ai traité vaut d'être cité pour son ironie immanente. Dans ma région existe une maternité, et le cheval de bataille des médecins y attachés, est évidemment l'absence d'infections. Or, voilà quelques années, une parturiente accouche d'un enfant couvert de bulles de pemphigus: bulles superficielles, grosses comme des lentilles, pleines d'un liquide louche, apparaissant par poussées successives et dûes au streptocoque en tout premier lieu, accessoirement au staphylocoque. Très contagieux, il eut en quelques jours contaminé toute la

clinique. Cette épidémie fut d'ailleurs observée et publiée par la Dr Lakaye à la Société de Dermatologie de Belgique. Il fallut fermer la clinique et la désinfecter intégralement.

Les bulles se dessèchent rapidement, laissant une peau très fine, rouge, desquamant par petits lambeaux. J'avais à ce moment une accouchée là-bas; elle fut contaminée, ainsi que son mari, alors que l'enfant, grâce à toutes les précautions prises, n'eut que trois ou quatre bulles.

Cette maladie dure plusieurs semaines; il faut traiter la streptococcie par l'application locale d'eau oxygénée sur les bulles préalablement ouvertes. On applique ensuite une poudre antiseptique: dermatol, aristol, crésosforme, ou une pommade épaisse (Pâte de lassar, par exemple), avec une faible teneur en sulfate de cuivre et de zinc. Ou bien on badigeonne au mercurochrome, non douloureux, ni troxique. On peut aussi donner des colorants azoïques, mais chez les enfants, rien ne vaut la médication externe.

La plus grande propreté est indispensable. Il faut isoler l'enfant malade.

Dr RINNE.

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